PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, AUGUST 6, 1887.

ORIGINAL ADDRESS.

ADDRESS IN MEDICINE.

Delivered at the Thirty-Eighth Annual Meeting of the Medical Society of the State of Pennsylvania, held at Bedford Springs, Pa., June 30, 1887.

BY FRANK WOODBURY, M.D.,

Professor of Therapeutics, Materia Medica, and Clinical Medicine in the Medico-Chirurgical College of Philadelphia, etc.

VIRCHOW, in a public address, recently declared that "disease has a material *ens:* its physical basis is the altered cell." This is the epitome of modern pathology and the problem of therapeutics. The possession of definite conceptions of the nature of disease based upon exact observation, both *intra vitam* and *post mortem*, distinguishes the medical science of to-day, and places it strongly in contrast with that of any preceding age. The employment of instruments of precision and the utilization of the results of the marvellous development of the other departments of science have enabled medicine to advance with such strides that to many its present condition appears a revelation, if not a revolution.

Increase of knowledge brings increased responsibility, and more accurate information concerning the nature of disease necessarily leads to improved therapeutics. The influence of recent advances in pathology upon our methods of treating disease, therefore, is the special topic which I wish to present for consideration in this address.

It was observed by the late Professor Flint that in many directions imperfect physiological knowledge had retarded the progress of pathology and of therapeutics. Is it not the case, at the present moment, that our knowledge of both physiology and pathology has apparently far outstripped that of the power of healing? Recent applications of such knowledge in sanitary science, by controlling epidemic outbreaks of yellow fever, smallpox, and cholera, and by successful disinfection, encourage the hope that equally great if not greater advances in sanatory medicine are just before us, if not actually within our grasp.

I would err if I failed to give a prominent place to the advances in medicine due to bacteriological studies, and to the discovery that most of the zymotic diseases are accompanied by the parasitic development and growth of living micro-organisms upon which the symptoms apparently depend. Moreover, similar organisms have also been found to be present in diseases which had not been previously considered infectious, such as pneumonia and meningitis. But before we hastily adopt bactericidal methods of therapeutics, we should be quite certain that they are the active agents in producing the symptoms, and that the welfare of the patient will not be imperilled. "Take care," says M. Peter, to the Paris Academy of Medicine, "take care lest in raising a club to strike the bacillus you do not at the same blow kill your patient."

The distinction is not made as often as it should be between bacterial infection and bacterial poisoning. Living bacteria must feed, and consequently must excrete. In some varieties of them the excretions are poisonous, and in others the excretions appear to be harmless to the human organism. The poisonous excreta are often of the nature of ptomaines. Pasteur has demonstrated that the virulent power of the bacteria of splenic fever is not a constant quantity: it can be intensified by propagation or rendered progressively weaker by cultivation, the organisms retaining their specific identity though losing their toxic powers. Wood and Formad have shown that diphtheria is probably caused by micrococci which are commonly found in the mouth, but which have acquired virulent properties in some unknown or accidental manner. Bacterial infection, therefore, does not always involve bacterial poisoning.

Since harmless micro-organisms may acquire toxic properties, some authorities believe that all toxic varieties were originally derived from innocent forms. A very interesting study of tuberculosis in birds* by J. Bland Sutton, F.R.C.S. (appearing in the *Journal of Comparative Medicine and Surgery* for October, 1886), led independently to the discovery of the identity of the disease in fowls and in man; and, secondly, to the inference that tuberculosis was originally communicated to man from the lower animals. A very suggestive and important hint is given as to the primary origin of the bacillus tuberculosis. It was ascertained that the disease prevailed to a great extent among grain-eating birds, that

* Ribbert, of Bonn, in 1883 had announced the fact that tuberculosis of fowls was identical with that of man.

the seat of local infection was the alimentary canal, and that the poisonous agent was tubercle-bacilli introduced with the food. It was found, moreover, that the excreta of the birds was a good breeding-place for bacteria, and that when grain was thrown upon the ground it became mixed with accumulated fæces, food-remains, moisture, feathers, etc., which thus were carried into the alimentary canal, together with numerous micro-organisms. "It is not improbable that the tubercle-bacillus may have its origin in this way," says Sutton, who further declares that "when microscopists shall have exhausted their endeavors in detecting specific differences among the infinite variety of micro-organisms, and then direct their endeavors towards the phylogeny of the various forms, they will possibly find that this remarkable bacillus, which be may fitly termed, with typhoid fever, a scourge and a bane of civilization, has been evolved from some harmless form, and that its peculiar character of thriving best at a temperature equal at least to that of the human body was first acquired by being transplanted into a medium, the chief constituents being *animal excreta*."

Nocard, who succeeded in inoculating tuberculosis from birds to mammals, thus proving the identity of the disease, believed that avian tuberculosis was acquired originally from human sputa or from the droppings of tuberculous cows; but Sutton considers this view as highly improbable. Furthermore, Sutton found that all that was necessary to check an epidemic of avian tuberculosis was to clean, whitewash, and ventilate the place where the fowls were kept.

This is in accordance with the clinical observation that external surroundings influence the development of pulmonary tuberculosis in the human subject. As directly bearing upon the question of the influence of the environment in causing the outbreak of phthisis, I may mention a valuable study of the distribution of this disease, entitled "Contribution to the Climatological Study of Phthisis in Pennsylvania," made by Dr. Wm. Pepper, published last year as the presidential address of the American Climatological Association.

The following are the points which are of special interest:

(1) Those portions of the State where phthisis is rarest are the most elevated, having a general altitude of fifteen hundred to two thousand, or, better still, of two thousand to three thousand feet, while in proportion as we enter districts of lower general altitude we find correspondingly increasing rates of mortality from consumption. (2) Some general correspondence is also observed between areas of greatest rainfall and the frequency of the disease. (3) In large cities the greater the crowding of population the greater the mortality from consumption. (4) Hereditary influence was frequently noted in replies to the circular sent out, and instances of supposed contagion were communicated by forty-five physicians.

It is quite evident that the tubercle-bacillus requires a peculiar condition of the tissues in order to develop, and that this condition of the tissues is likely to be encouraged or established by residence in a low, damp locality and by overcrowding. Culture-experiments have shown that this bacillus grows most rapidly at a temperature above that of the healthy human body,—a temperature, however, which is normal in birds, and among which the relative mortality is far greater than in man. An important point, therefore, in the therapeutics of pulmonary tuberculosis is to keep down the fever by the use of the antipyretics. As the treatment of phthisis will be discussed specifically by those who follow me, I do not consider it proper to speak of it further.

A great advance has been made of late years in the therapeutics of fever, as the result of a better understanding of normal thermogenesis and the pathology of pyrexia. The source of all the energies in the body is the food, which is largely consumed in maintaining the animal temperature. But, in addition to maintaining temperature, energy is required for building up the tissues and for supporting physiological functions, such as the circulation, respiration, secretion, and locomotion. In fever the regulating power is disturbed, and an excess of energy is manifested as heat, thus defrauding the tissues and weakening functional power, and causing wasting of tissues and bodily prostration, which are as characteristic of fever as is the elevated temperature.

In the discussion on Fever at the recent meeting of the American Association of Physicians, the belief appeared to be gen-

erally shared that too much attention had been given to the mere element of elevated temperature, and that it is not all of the fever process by any means. In the use of antipyretics we are to be guided by other features in the case, and while in some cases the temperature may be kept down by antipyrine it does not follow that the disease will be shortened by it or that relapses will be prevented. This does not deny usefulness to this method of treatment, but is a protest against routine practice. In typhoid fever, however, good results were reported from the early use of calomel followed by naphthalin in doses of sixty to eighty grains per diem, given during the first ten days. After this the treatment does not materially change the course of the disease, except that by preventing hyperpyrexia it makes the patient more comfortable. The fever process appears to be the result of lowering of function of certain nerve-centres by a poison circulating in the blood, the poison being in most instances connected with the growth of bacteria, but their presence is not necessary, since fever can be produced by the injection of peptones into the blood (as in Dr. Wood's experiments) or simply by fatigue.

If it be really the case that harmless bacteria may, under the peculiar circumstances mentioned by Sutton, become converted into the noxious or specific bacillus of tubercle, it certainly is not without analogy in other infectious diseases. The human alimentary canal contains many micro-organisms which especially develop during attacks of diarrhœa and dysentery. Under these conditions Lewis and Cunningham detected a comma bacillus resembling that described by Koch as peculiar to cholera Asiatica. A similar organism has been described in summer or sporadic cholera, differing in unimportant particulars from Koch's bacillus. If we would seek for the evolution of the true comma bacillus, let us go to the native home of the cholera in upper India. Here we find a native village among the hills, on the border of a lake, which supplies the inhabitants with drinking-water. During the rainy season the accumulated filth of the village is washed into the reservoir. In the dry and hot seasons the border of the lake is exposed to the sun and breeds micro-organisms, which are taken into the stomachs of the villagers over and over again until they acquire the necessary virulence to initiate an epidemic, which starts on its way around the world. The possibility of this conversion of the ordinary bacteria into septic forms is strongly advocated by Nägeli;* and Büchner, indeed, claims to have successfully evolved the bacillus of anthrax from the ordinary bacillus of hay-infusions (B. subtilis). Even though this claim should not be admitted, it must be acknowledged that there is a strong probability that infective bacteria have not always possessed their noxious qualities, but have acquired them somehow in the course of ages. It is quite evident, however, that the recognized varieties of pathogenous bacteria retain their properties with a certain tenacity, and this will explain why at the present time transformation of innocuous into noxious bacteria can occur but rarely and only under very exceptional and special conditions. P. Zweifel claims that the important condition is a deficient supply of oxygen.† In other words, even if the pathogenous bacteria do not represent biological species, they are apt to maintain the pathogenous forms for long periods of time.‡

The evolution of the specific element in yellow fever might be traced in a similar manner to that of the cholera bacillus.

The active agency in malarial intoxication is in all probability an instance of an ordinary microbic form becoming specialized under favorable conditions of temperature and soil, where animal and vegetable refuse is undergoing decay. The many attempts to isolate the bacillus malariæ, however, have failed to establish its specific identity. Comparatively recently Laveran has described a body existing in the blood of persons during the paroxysm of ague which is absent at other times. This has been confirmed by Councilman, of Baltimore, and Osler, of Philadelphia, who each affirm its great value in diagnosis. Since typhoid fever appears to succeed malaria in many communities, it is probable that the special bacillus of Eberth is likewise the result of the development of an ordinary zymogenic bacillus which has acquired specific properties from being kept for generations in contact with animal and vegetable refuse.

* Die Niederen Pilze, Munich, 1877, 1882.
† Zeitschrift für Physiologische Chimie Ph., No. xiii. p. 14.
‡ Ziegler, Text-Book of Pathological Anatomy and Pathogenesis, p. 314. American edition, 1887.

The investigation of the relationship of bacterial infection to disease brings us to the very important question of vital resistance. How can the human system be protected from being injured by the inroads of micro-organisms? Clinical experience has taught that by surviving one attack of most of the infectious diseases a change is wrought so that the system is proof against subsequent infection of the same malady. The disease may even be induced in a mild form, as by vaccination, or as in Pasteur's cultures of the micrococcus of splenic fever, and the vital resistance increased so as successfully to resist future attacks. It is believed that this is brought about by a process similar to acclimatization; the tissues becoming accustomed to the poisons generated by the bacteria, just as we see the organism becoming accustomed to the effects of other chemical poisons, such as nicotine, morphine, arsenic, or alcohol.* Some recent investigations seem to show that it is not necessary to introduce the poisonous bacteria themselves, but merely their chemical products, in order to obtain immunity from further infection. Chauveau claimed that vaccine lymph could be diluted one hundred and twenty times without losing its protective power; and it has been recently asserted that rabbits have been rendered proof against anthrax by injecting hypodermically a chemical solution, as predicted years ago by Toussaint and Paul Bert. It is a well-established fact that a course of quinine will enable a man to escape malaria, although exposed to the infection, and Tommasi-Crudeli, from experiments on workmen on the Roman Campagna, demonstrated conclusively the protective power of arsenic in the same manner. The therapeutic use is closely related to prophylaxis. If the experiments of Pasteur in hydrophobia may be accepted as establishing anything conclusively, it is that hydrophobia is curable by a chemical agent of the nature of a ptomaine derived from the spinal marrow of infected animals.

It is a fact believed to be established by experience that the daily use of sulphuric acid or alcohol during a cholera epidemic will prevent infection. This is not without consolation for those who fear infection from the ubiquitous tubercle-bacillus. Possibly the use of alcohol, so strongly advocated by Flint in incipient phthisis, may be a highly rational treatment, after all, for the prevention of tuberculosis.

Freire is conducting on a large scale an experiment by inoculating thousands of laborers with cultures of the micrococcus xanthogenicus; but if the same result can be achieved by some chemical agent, it would be a decided step in advance.

As a further result of these studies, it is very evident that the human body is prepared for all kinds of disease by unwholesome surroundings and bad hygiene. Parents living under such conditions have offspring that are ready to succumb to any disease on account of defective vitality.

Many children come into the world with the verdict "unfit to survive" stamped upon them. They furnish the great number of deaths from so-called cholera infantum during the first two years of life. Much of this, according to my view, is a necessary mortality on account of defective vitality. If they grow up, some organ which is especially vulnerable is constantly giving trouble by breaking down.

Dr. Budd called attention to the congenitally insufficient liver as a prolific source of bilious attacks and gout. Relative smallness of the heart and pulmonary artery, also congenital, is one of the recognized predisposing causes of pulmonary disease in later life. Weak digestive powers have great capacity for producing migraine, melancholia, and manifold miseries. Renal inadequacy, inherited or acquired, is the cause of lithæmia, headache, and nervous symptoms, as well as other physical disorders, such as eruptions on the skin.

The field of future medicine is therefore limited by the perfectibility of the human race. Disease exists because some families around us are in process of extinction and are more or less defective, while others, by reason of superior vitality, are building up types that are destined to survive in the struggle for existence. Statistics might be given to show what service has already been rendered by medicine in ameliorating the conditions of existence, lengthening average human life, and reducing the inroads of disease. The single operation of ovariotomy, it has been computed, has added thousands of years to woman's life; but who could compute the number of

* Prof. James Law, F R.C.V.S., ably defends this view in a paper on "The Rôle of Microbes and their Chemical Products in the Causation of Disease," *Journal of Comparative Medicine and Surgery*, August, 1886.

years given to humanity by the practice of vaccination or by the introduction of antiseptic methods into surgery?

In illustration of the benefits of the recent improvements in surgery in what is usually considered the field of medicine proper, I may cite the diagnosis and removal of intracranial growths, ten cases of which, with only two deaths, were reported by Mr. Victor Horsley during the past year, the removal of hydatid cysts from the lungs, as reported by Dr. Fenger, of Chicago, the resection of the ribs for chronic empyema, aspiration of the chambers of the heart for acute over-distention, the pyloric resections in cases of cancer of the stomach, and various operations upon the other viscera, which until recently were considered beyond the aid of art. Recently I had the honor of reporting a case of perityphlitic abscess to the College of Physicians of Philadelphia, in a man of twenty-six years of age, who had the operation of laparotomy performed, the abscess freely opened, and the diseased vermiform appendix amputated, followed by complete recovery in less than a month after the operation. In cases of acute perforation of the bowel in typhoid fever, Dr. J. C. Wilson, of Philadelphia, recommends opening the abdomen and treating the case as a perforating wound or acute obstruction of the bowels. If modern surgery has enlarged our therapeutic resources, it has also increased our ability to interpret symptoms, for which we are largely indebted to the labors of the skilful specialist. Hay fever is now understood to be a neurosis associated with nasal hyperæsthesia. Headaches are frequently caused by eye-strain. Some cases of bronchial asthma are demonstrably dependent upon nasal hypertrophies. Pelvic disorders in women are seen to be the true cause of much general ill health. Dr. S. W. Gross claims that similarly a pain in the back in the male may be caused by an over-sensitive urethra, and I have even noticed lately that Dr. Orendorff, of Louisville, goes so far as to declare that locomotor ataxia may be caused by urethral disease, and that the majorities of ataxics have stricture of the urethra.*

Dr. T. G. Morton, in a paper published in the *Philadelphia Medical Times* for July 10, 1886, has shown the true explanation of some cases of supposed lateral curvature of the spine, in the want of symmetry of the length of the lower extremities. Many cases of persistent pain in the back may be cured by simply elevating the heel of one shoe so as to make both legs of equal length.

Very much of the defective development of adults, I fear, is traceable to an undue amount of application required of children in school life. The ill effect of excessive brain-work upon the development of the teeth has been noted, but we are not in a position to estimate the impairment of other digestive organs, except by the frequency of indigestion among young adults. The book of nature is much more attractive to children than dead languages and doubly dead authors. Our children do not compare in their physical development with young savages. We are almost tempted to echo the wish of the laureate, to return once more to a state of nature, and rear a

"dusky race.
Iron-jointed, supple-sinewed, they shall dive, they shall run,
Catch the wild goat by the hair, and hurl their lances in the sun;
Whistle back the parrot's call, and leap the rainbow of the brooks,
Not with blinded eyesight poring over miserable books."

The introduction of physical exercises in higher colleges is well; but are they not more needed in the preparatory schools? It is an encouraging sign that the attention of the profession is turning again to gymnastics as a therapeutic measure. Dujardin-Beaumetz has recently delivered a lecture highly extolling the effects of kinesitherapy, as he styles it, in the treatment of many diseases, notably diabetes and gout. The Swedish movement cure is becoming better appreciated as it is better known by the profession. In many disorders well-regulated exercise is a necessity. Bouchardat used to insist upon his diabetic patients cutting their own wood, practising fencing, and other gymnastic exercises. Chomel said that they should digest with their legs. An important part of the celebrated Clemens treatment of diabetes was open-air exercise.

"Leb' mit dem Vieh als Vieh
Und acht es nicht fur Raub
Den Acker den du pflügest, selbst zu düngen,
Das ist das beste Mittel, glaub',
Auf hundert Jahr' dich zu verjüngen."

Mental strain is now recognized as a prolific cause of diabetes. In the treatment of such cases, the question of diet becomes less important than the adoption of a more

* Progress, 1886, p. 162.

natural course of life. It is also significant that the late Willard Parker, from his very great experience, gave it as his deliberate conviction that mental anxiety is one of the chief causes of cancer of the breast. Those twin jailers, iron fortune and lowly birth, with the ambition to get on in the world, are responsible for a large amount of sickness in the community. Many have no time to consider the question, "How shall I keep well?" since their whole mind is occupied with the problem, "How shall I get a living?"

We are forcibly reminded of the old physician in one of Balzac's novels ("*Cousin Pons*"), who declares, "I have spent my life in seeing people die, not of their diseases, but of that great and incurable malady, the want of money."

In this direction the community is in need of good advice. It should pay more attention to maintaining physical health by physical exercise. I have been struck by the fact that the large hospitals, as a rule, have no means for systematic exercise as part of the treatment; the patients spend their time in absolute idleness. Every hospital should have its gymnasium. Massage is becoming more used in this country with decided advantage to patients. It is not in America, as yet, used regularly to any extent in health, as it is in Japan, where it is very popular under the name of the "body-regulating art." Dr. Norton Whitney, of Tokio, wrote a letter to the *Philadelphia Medical Times* some years ago, on the "Employment of the Blind in Japan," in which he recommended teaching massage to the blind in this country as a means of earning a livelihood. We hope to see this adopted; the demand will increase with the supply. One or more practitioners of massage should be attached to each hospital in the land.

While on the subject of constitutional weakness, let me say that a prolific source is the inability of mothers to nurse their infants, and the inevitable resort to the various forms of infants' food. I have lately noticed that by the application of faradism to the mammary glands after confinement, the flow of milk can be induced. Not only this, but the novel statement is made that a flow of milk may be induced in the breasts of virgins by the same means. This affords a source for an unlimited supply of wet-nurses, with a corresponding reduction in the consumption of various baby-foods, and possibly also a marked decrease in the mortality from "teething" and "summer complaint."

One of the most hopeful evidences of advance in medicine is the growing appreciation of the work of the general practitioner. There are signs of a healthy reaction against the dogmatism of the laboratory and the arrogance of a narrow specialism. Professor Leyden, as president of the recent German Congress of Internal Medicine at Wiesbaden, has well defended this view. He says, "The present age is scientific and experimental, and medicine has partaken of the general tendency, and has become an experimental science. But the scientific and experimental work in the laboratory, upon which so much weight is placed, and which has unquestionably contributed to exactness in our knowledge, fails to answer the demands of the present, however much it may promise for the future. The living present has claims which the physician must not overlook in his zeal for mathematical exactness in diagnosis and mechanical treatment. It is time to remind the practitioners of our day that the inexhaustible source of all knowledge and progress in medical art is observation at the bedside of the patient. Experiment is one-sided, complete knowledge of disease can be gained only by studying cases." "The true function of medical art is not to treat diseases, but to treat persons who are sick." The study of the individual needs of the patients under our care, in order to adapt our remedies to their requirements, is the path by which Hippocratic medicine has advanced and must continue to advance. It was this that led Paré to substitute the ligature for the cautery for the relief of hemorrhage on the field of battle, which led Hunter to tie the artery in its continuity for the treating of the case of the coachman with popliteal aneurism, that led McDowell to perform ovariotomy, or Sims to his operations upon conditions which hitherto were beyond the reach of medical art. Thus it is that the general practitioner fulfils the dictum of Hippocrates: "Medicine consists of addition and subtraction—the subtraction of that which is redundant and the addition of what is deficient, and he that does these things best is the best physician, and he that is most removed from this system is the most removed from a knowledge of the art."

ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF OTOLOGY.

BY CHARLES H. BURNETT, M.D.,
Professor of Otology, Philadelphia Polyclinic.

CYSTS OF THE AURICLE.

DR. H. SELIGMAN, of Frankfort-on-the-Main, publishes a short account of the occurrence of a cyst in the auricle, which he considers corroborative of the views advanced by Hartmann, some time previous, in the *Archives of Otology* (*Archives of Otology*, vol. xvi. p. 41, 1887).

Mr. W., 35 years old, with sound intellect, applied to Dr. Seligman in May, 1885, for relief from a swelling of two months' duration, in the usual situation of an othæmatoma, between the upper portions of the helix and the anthelix of the right auricle. The skin was very tense and somewhat hot. The swelling was the size of a walnut, round, tense, smooth, and not tender to the touch. The rest of the cartilage was normal, and traumatic influences could be positively excluded. The patient would not consent to an incision. The tumor was therefore tapped by means of a Pravaz syringe, and about three cubic centimetres of a thick, transparent fluid, of a light yellow color, was drawn off.

The point of puncture was then covered with a piece of adhesive plaster, and the pinna being padded with cotton, a bandage was applied. There was a slight reaccumulation of the fluid, but subsequently the ear assumed a normal appearance without further treatment.

The morphological elements contained in the fluid were mucous filaments, some white and a few red blood-corpuscles. This circumstance, in connection with the absence of pain and traumatism, and the good general health of the patient, renders it likely that this was a cyst and not an othæmatoma. In regard to treatment it is suggested that multiple punctures be tried in preference to incision, the latter being resorted to if the former fail.

THE CAPACITY OF THE AUDITORY CANAL.

Both Von Troeltsch and Kirchner have placed the average length of the auditory canal at twenty-four millimetres. The latter dimension has been placed at twenty-four and four-tenths millimetres by Bezold, the minimum being twenty-one millimetres, and the maximum twenty-six millimetres. But no one has, so far, endeavored to determine the capacity of the auditory canal. Dr. Hummel, of Munich, has, however, made a long series of examinations, two hundred in all, upon soldiers between the ages of twenty-two and twenty-four, in order to determine the capacity of this important canal, both in health and in disease. (*Archiv für Ohrenheilkunde*, Bd. xx. pp. 263–299, May, 1887.) The average capacity of the normal right auditory canal is one and seven-hundredths cubic centimetres; of the left, one and five-hundredths cubic centimetres.

Pathological cases—viz., otorrhœa with perforation of the membrana tympani, upon one side, with intact normal ear upon the other—furnish marked differences in cubic capacity. Thus, the healthy side may have a capacity of one and six-tenths cubic centimetres, while the diseased side may have a capacity as high as four and two-tenths cubic centimetres.

By a comparison of such differences in a given case, some idea can be formed of the extent of the destructive process, and the author claims to have pointed out a new diagnostic means.

CHRONIC PURULENT INFLAMMATION OF THE TYMPANIC ATTIC.

Dr. H. N. Spencer, of St. Louis, Missouri, having several cases of attic disease under treatment, has contributed a short paper on their nature and treatment. (St. Louis *Courier of Medicine*, May, 1887.) Chronic purulent inflammation of the attic may be limited to this cavity or be associated with a similar process in the atrium. It may have had its origin in the attic or have resulted from extension of inflammation. Dr. Spencer has not observed any special tendency on the part of attic disease to pass into mastoid disease. This conclusion is based on eighteen years of experience with aural remedies. "We have not infrequently, in the course of a purulent inflammation of the middle ear, especially in its exacerbations, indications of mastoid cell disturbance. Sometimes there is considerable pain, with tenderness upon pressure behind the ear, and external redness and swelling. These symptoms may be present to an alarming extent, and will disappear with no special attention being directed to them beyond a continuance of care for the middle-ear trouble,

except that I am in the habit of prescribing a few grains of calomel under these circumstances in combination with quinine. I have known repeated recurrences, all finally yielding to improvement in the general health and the bettered condition of the tympanum." Subsequently a further very pertinent allusion is made to mastoid disease in general: "Either diseases of the mastoid are of less frequent occurrence in the West than in the East, and less in this country than abroad, or perforation of the mastoid process is often unnecessarily performed, and an overweening desire to add to a number of operations magnifies the subjective and objective indications for surgical interference, and prejudices the otherwise good judgment of the operator. I make this statement with some hesitation, but from a conviction of the truthfulness of it so far as *my experience* has gone, founded upon upwards of twenty-five thousand cases of ear-disease seen in private and hospital practice."

Pathology.—There are said to be two forms of purulent inflammation of the attic, one characterized by swelling and a tendency to proliferation and organization of tissue, and the other by a thinning of tissue, or tissue-waste. The opening through which drainage takes place is in Shrapnell's membrane, or the flaccid membrane of the tympanum, that portion above the folds of the membrana tympani. In the first-named form, the hyperplastic, the edges of the perforation and the surface of the cavity beyond are red and swollen. Sometimes there are found villous projections, papillary growths, and even large polypi. In the second form, that of tissue-waste, the edges of the opening in the membrane are thin and white, and the tissues in the attic beyond have the same appearance. The discharge is often scanty, and dark brown in color. It may even harden into a black mass, assuming the shape and mould of the cavity, a slow process of waste going on beneath. This second form is considered by Dr. Spencer to be the more intractable of the two, and more likely to result in caries of the bone. The head of the hammer first, and next in point of frequency the head of the incus, are liable to become affected by carious action.

Treatment.—It is recommended in those cases of suppuration of the attic that present polypi or polypoid masses to operate for their removal at once, and to curette the mass or masses as high up as it is possible to do so. An anæsthetic may be employed or not, as seems necessary. Immediately after the operation Dr. Spencer employs a saturated solution of nitrate of silver, "which, being taken up on a tightly-twisted bit of cotton, projects one-sixteenth of an inch beyond the point of the holder, and, bent at a right angle with the shank, is passed over the margin of the plate and carried well up into the cavity." It does not seem necessary to neutralize this, but to dry the parts well with absorbent cotton to prevent excess of the fluid. The operation and the caustic are to be followed by the application of absolute alcohol or a saturated solution of boric acid in absolute alcohol, by instillation. It is to be understood that during this course of treatment the ear is to be kept very clean. The discharge is usually quite abundant.

In the second class of cases the treatment is different. In this form of disease atrophic processes are to be combated by a stimulating method. Here peroxide of hydrogen is employed, being slightly stimulating and somewhat disinfecting. Nitrate of silver is also advised, but all stimulation must be mild. The pus-cavity can be cleansed with the tympanic syringe, but not too frequently, as the repetition of this method at short intervals is prejudicial to speedy healing. The form of cotton-holder is of importance, steel being the only efficient kind. The shank must be slender, and the point unnotched. The point can be improved by subjecting it to acid.

CHRONIC CATARRHAL INFLAMMATION OF THE MIDDLE EAR.

Dr. Albert H. Buck, of New York (*Medical Record*, January 1, 1887), has contributed a paper on this subject, representing his conclusions as to the seat, the cause of this disease, and also its treatment, based on personal observations of cases during the past fifteen years. Formerly attention was directed chiefly to the Eustachian tube and middle ear, while the pharyngeal vault was overlooked, and he might have added the nares too. Now the pharyngeal centre is considered more important, and to it treatment is directed. The causes are manifold and complex. Cold in the head, the metabolic processes of assimilation

and metamorphosis, tobacco-smoking, climate, clothing, hygienic mistakes in either too much or too little ventilation of apartments, by day and by night, and finally the retention and inspissation of secretion in the crypts of the tonsils. It is recommended to explore these half-dozen crypts wherever the tonsils are found enlarged and show a tendency to congestion. For this purpose a slender ring-shaped curette of steel, with nicely-rounded edges, may be used both to explore and cleanse the crypts of foul-smelling, cheesy matter. After that the cavities should be syringed with listerine and water, one part to two or three of water.

If sclerosis of the mucous membrane in the drum-cavity and stiffening of the bones have not occurred, but if the disease is still in the hypertrophic and hyper-secretory state, it is reasonable to hope for benefit from treatment. Pains must be taken to find out whether the case is made worse by tobacco-smoking or undue exposure to draughts of cold air during sleep, or whether the disease "owes its chief activity to a lithæmic diathesis." One or two cigars a day may be allowed. No cold draught should be allowed to fall on the head while sleeping; but opening of all the windows of the sleeping-rooms in cold weather seems too rigid a course of management of chronic aural catarrh. The lithæmic taint must be overcome if the local treatment is to have a good effect. The amount of food must be carefully inquired into, and also the daily exercise. A full-grown man should get at least four miles of walking in the open air daily. Coffee, pastry, and all alcoholic drinks must be abandoned. "A warm bath every night, followed by brisk rubbing with a coarse towel, will stimulate the skin to perform its emunctory functions with increased vigor."

In the local treatment chief reliance is placed upon nitrate of silver and tincture of iodine applied to the naso-pharynx, because they are "the most efficient remedies known, in respect to their power to diminish undue vascularity, infiltration, and hyper-secretion of a highly glandular mucous membrane." Nasal sprays do not seem to enter largely into the methods employed by Dr. Buck, although he has succeeded in relieving tinnitus aurium by a spray of listerine and water, one part to three.

AURAL DISEASES FROM MALARIA, AND AUDITORY DISTURBANCE FOLLOWING THE USE OF SULPHATE OF QUININE.

There are few subjects more difficult to study than auditory diseases caused by malaria, and there is constant confusion between the phenomena due to malaria and those due to the administration of the sulphate of quinine. Weber-Liel's work on this subject is both the oldest and the best. He holds that the paludal poison may affect the ear in two ways,—viz., by an inflammatory process, and by a non-inflammatory process (otalgia intermittenta). In both cases it is the third branch of the trigeminus in the tract in which occurs either a paludal neuralgia or vaso-motor disturbances leading to inflammation.

Ferreri (*Annales des Maladies de l'Oreille, etc.*, May, 1887) has made a recent study as to what part in the production of aural diseases may be ascribable to malaria, and what to quinine. He therefore gave large doses of quinine to thirty patients suffering with malaria, but unaffected in their ears. The subjective symptoms following the drug manifested themselves four hours after its administration, but in no case was there pain in the ear, and in twenty-four hours all subjective symptoms had disappeared. Again, in the Roman Campagna, where malarial diseases are so numerous, affections of the ear are rarely seen. In four thousand five hundred and seventy-four cases of ear-diseases observed in the otological clinic of Rome, between the years 1874 and 1886, only eight cases of malarial otitis were recorded. According to Ferreri, the acoustic nerve and the sensitive nervous branches of different parts of the ear are chiefly attacked, in chronic malarial cachexia, in the form of neuralgias more or less intermittent.

Quite an intense hyperæmia of the middle ear, with serous effusion into the membrana tympani, without ulceration of that membrane, is met in cases of acute malarial infection. The chief symptom thus induced is an intense boring pain, recurring at regular intervals. It is probable that in such instances the chief anatomico-physiological lesion is an irritation of the tympanic plexus. These lesions are characterized by (*a*) absence of suppuration, and (*b*) ready cure by means of quinine. Aural maladies from malarial poisoning are very rare in children.

A CASE OF NUTMEG-POISONING.

BY JOHN GILLESPIE, JR., M.D.

MRS. M., the mother of seven children, finding herself again pregnant, and acting under the advice of a friend, procured five nutmegs, grated them down, diffused them in warm water, and took the whole at one dose when just about to retire for the night.

Soon afterwards she fell asleep, and was awakened by one of her children crying, when she arose and walked steadily to the bureau to get a glass of water for the child, but on reaching the bureau found that she was unable to grasp the glass containing the water firmly enough to carry it.

On attempting to return to bed she staggered, and, on reaching the bed, fell on it rather than got into it. Until this time there had been no unusual sensations. In a few minutes her head began to ache and her face began to tingle and itch, and she "felt as if her head was turning around and around."

By this time the patient's husband had been aroused, and he noticed that his wife's face was very much flushed, and that she was bathed in perspiration.

Nausea now became very distressing, and the patient complained that her head and face "were swelling." For several hours these symptoms continued, with the addition of frequent and copious micturition.

When I reached the house, five hours after the symptoms first appeared, and about six hours after the nutmegs had been taken, I found the woman in the following condition: the face was very greatly flushed and swollen; the pupils were contracted but sensitive; the heart was pulsating at the rate of 130 a minute; the pulse was of fair strength and volume; nausea was very great, but there was no vomiting; there was no abdominal pain, nor did firm pressure over the abdomen cause any pain. The patient was perspiring very freely, and complained bitterly of frontal headache and of vertigo. There had been no purging.

I immediately administered an emetic of sulphate of zinc, gr. xxx, and awaited developments. In a few minutes the zinc produced emesis, and among the rejected matter were many particles of the grated nutmeg.

The emetic appeared to relieve the headache and vertigo, and the woman was much more comfortable for more than an hour, when, without any warning, there was sudden failure of the circulation, and all the signs of collapse came on. The face became pallid, the pulse very rapid and weak, the respiration hurried, and the patient's countenance betokened great anxiety.

Under the use of five-drop doses of spt. ammoniæ aromat., well diluted and frequently repeated, color returned to the face, the pulse became stronger, the respiration natural, and there were no further symptoms to cause alarm, and after a day in bed the patient was practically well, although the headache and the œdema of the face continued for several days, a small dose of castor oil completing the treatment.

By taking other nutmegs which were in the house and weighing them, I estimated that the weight of those taken by the woman was fully five drachms and a half.

The peculiar features of the case to me were the absence of abdominal pain and the fact that there did not appear to be any narcotic effect produced, as there was at no time any tendency to drowsiness.

The reason for using such a small dose of the aromatic spirit of ammonia was to guard against aggravating any tendency to abdominal or gastric irritation.

1434 South Broad Street, Philadelphia.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINICAL SERVICE OF JOHN H. PACKARD, M.D., ONE OF THE ATTENDING SURGEONS OF THE HOSPITAL.—RAILROAD CRUSH PRODUCING VENTRAL HERNIA—DISLOCATION OF RIGHT HIP JOINT—INCIPIENT ŒSOPHAGEAL STRICTURE, PROBABLY FROM EPITHELIOMA—CASES OF SUPRA-PUBIC CYSTOTOMY—OPERATION OF EXSECTION OR EXCAVATION OF ASTRAGALUS.

GENTLEMEN,—The man before you was caught last Monday between the bumpers of railway-cars. Fortunately, the effects of this crush were not very disastrous, and it was only on last evening that he presented himself at this hospital for treatment. You will notice quite extensive ecchymosis, widespread over the whole of the left lateral surface of the abdominal walls. Being now many hours old, this ecchymosis presents all the varied mixture of tint and shade and color of the "autumn leaf," and from the

same radical causes,—viz., it is due to the last pigmentary changes in the coloring matter of the blood before finally being partly absorbed.

On the man being directed to restrain his breathing, and again on being told to cough, you note first a large flattened swelling of the left groin, and then a decided impulse given to my hand and fingers, which are in close contact with the protruding surface.

Tracing this protrusion as to its boundaries, I find that its axial centre is above "Poupart's ligament," to the right of the anterior superior iliac spine, to the left of the outlined edge of the left rectus muscle. It is a true "ventral hernia." The crushing force of the injury lacerated the walls of the abdomen in their middle portions; the peritoneum remained intact, as well as the external covering of integument, but the muscular walls of the abdomen were thoroughly torn apart, thus permitting the contents of the cavity to push forward into this flattened but large ventral hernial sac. Here, by the way, let me say that umbilical hernia, which is frequently congenital, may exist at the umbilical ring or through the abdominal walls, and appear in the same locality, but there is a great difference in the two conditions.

As to treatment of the case before us, nothing more may be hoped for but that a properly shaped and sized pad with raised edges, held by a suitable truss and worn by the patient indefinitely, will result in the remote possibility of a reunion of the lacerated muscular and cellular tissue, and the formation of a hard cicatricial mass.

Case II.—This colored man, who is not only aged in appearance, but really older than he seems, was the sufferer on Tuesday last from a falling pier of masonry in a cellar-excavation, dislocating his right femur. On admission his aged look warranted the diagnosis of a fracture of the femoral neck, but on examination the case proved simply one of luxation of the head of the femur backward on the dorsum of the ilium. After etherization, I made use of manipulation, bending the knee, flexing the thigh upon the abdomen, and forcibly rotating the whole limb while abducting it. The head of the femur, however, while moving readily towards and around the acetabulum, refused to enter its old socket, and I was about having recourse to the pulleys as a means of extension, when in their stead I adopted the following means, which were successful. The patient lying on a folded blanket on the floor, and I sitting on a chair at his right side, I slung his knee of the injured side over my right knee, and had traction made on his foot, while his pelvis was firmly held down. Thus I got a very effective extension made, which in a few moments was successful, the head of the bone slipping into the socket with an audible snap. I think that some of the thickened ligamentous bands connecting the femoral head and neck with the spinous process of the ilium had acted as a bridle-like impediment to the entrance of the head into the socket, but when extension had been forcefully made in the above gradual manner there was a speedy restoration of the articulating surfaces.

Case III.—This colored patient complains of a slight dysphagia. I select a large, olivary, ivory-headed flexible probang, and will now pass it well upward and backward against the roof of the mouth, soft palate, rear of pharynx, and finally behind the epiglottis, and while he makes an effort at swallowing, I now pass it down the œsophagus into the stomach. On withdrawing it slowly, I find that just at the upper part near the pharynx there is a slight constriction, which in this case is probably epitheliomatous in character. It is best in these cases, as in those of stricture of the urethra, to use the largest available instrument, lest injury should be done to the mucous membrane; and all force should be carefully avoided, either in the introduction or in the withdrawal.

Case IV.—The next case, also a colored man, represents not only itself, but also another patient, a white man, older, and in a more serious plight, in both of which we have this week performed supra-pubic cystotomy.

These are cases of great interest to me, both by reason of my experience in at least twelve others of like character, and on account of the objections which have been urged against the operation. These objections, as I shall demonstrate to you, are of no weight provided the procedure is made with proper precautions and in the light of nineteenth century surgery. In both cases, which entered the hospital within a period of thirty-two hours, there was inordinate distention of the bladder.

There had been the usual futile attempts made at catheterization, there had been a forceful pushing at and "ploughing up" of the enlarged prostate gland in both, followed by the usual hemorrhage, pain, anxiety, and shock. One case also was suffering with double inguinal hernia and double hydrocele.

In both cases we made the usual incision through the integument an inch and a half in length above the pubes. If the incision be made low and near the pubes, on the emptying and shrinking of the bladder the parts are sure to be drawn asunder, and the danger of infiltration of urine into the post-pubic cellular tissue is much increased. After dividing the subcutaneous fat, which in some cases may be more than an inch in thickness, we reach and consecutively sever the aponeuroses of the abdominal muscles and the pyramidales, and reach the enlarged and distended bladder.

Lifting this with tenaculum, or, as I prefer, with a stitch of ligature, we puncture it either with a trocar and canula, or simply with the tenotome, afterwards enlarging the opening with a probe-pointed bistoury. In place of a canula of metal some use a glass tube, which, being left in place, is not so rapidly fouled as the rubber or metallic tube. In using the tubes a portion of elastic caoutchouc cloth, or "rubber dam" of the dental profession, may be slipped over the end of the tube, thus making a perfectly cleanly water-tight covering for the parts, between which and the abdomen may be a little lint, and in front of which may be placed an amount of absorbent cotton to retain the urine as it flows. In the cases now before us I used the rubber tubing, which enters the bladder, and then is passed across the iodoformed surface under a pad of cotton bandage around the loin to the urinal bottle, thus draining away all the flow.

The colored man before you, as you will observe, and as you notice from the temperature-chart, has been progressing excellently.

The other, who is an older and less healthy subject, is not doing so well. His urine contained quite a serious amount of albumen; he has contracted kidneys, and his uræmic condition and fluctuating temperature seem to portend a serious termination. He, an older man, and with greatly enlarged prostate, has been subjected to more injury from the attempts at forced catheterization. There is also in this, his urine, discoloration due to blood, which may be from the wounded prostate, and the inflamed and contracted kidney as well.

In supra-pubic cystotomy we need never fear the presence of the fold or pocket of peritoneum, as the more enlarged the bladder is by its enforced distention, the higher rises the peritoneal fold before it, so that it lies above and out of the line of puncture.

Case V.—I now will proceed to excavate and resect the astragalus in the youth who is here etherized before you.

In the case now before you you observe synovitic tenderness, and swelling around the ankle; the jerking, painful contraction of the muscles, which has been explained by Hilton as caused by the same nerves which supply the muscles, also sending filaments to the joints themselves, thus keeping up irritation and motion, which mutually react upon and increase each other indefinitely. I make the same curved incision on the exterior of the right foot, and near to and parallel with the peroneal tendon, as you saw me do a week ago; now I, with blunt knife, elevator, lenticular knife, gouge-forceps, and curette, will scrape, break, crush, and remove all the deteriorated, friable, softened astragalus, avoiding the posterior tibial artery carefully, and, as I bring out the articular smooth surfaces of the astragalus, I know that the disease is entirely removed.

I now pack the wound with iodoform lint, and suture the structures together, excluding the peroneal tendon, with the catgut. A moulded anterior zinc splint, well stuffed with cotton, is placed upon the upper padded surface of the limb. With antiseptic dressings, in a few weeks this youth will most probably recover, with a foot and ankle but very little deformed or impaired in motion.

GONORRHŒA TREATED BY ALKALINE INJECTIONS.—Castallan, of St. Mandrier Hospital, recommends a one-per-cent. solution of sodium bicarbonate for urethral injection, and reports twelve cases successfully treated. His theory is that the bacilli of gonorrhœa can flourish only in an acid medium. He claims that the injection prevents the growth of the bacilli, rapidly reduces the discharge, and diminishes or removes the pain in micturition.—*Medical Press and Circular.*

TRANSLATIONS.

ON THE SENSIBILITY OF THE TYMPANUM IN PERCEIVING THE DIRECTION OF SOUND.—When a sound strikes the ear, we locate its source in that point of the horizon towards which the external opening of the organ happens to be directed at the moment of the most intense auditive sensation, and we exteriorize the sensation, attributing its cause to something exterior to ourselves. We thus acquire at once the notion of exteriority and the direction of the body producing the sound.

How is this result obtained? As regards the knowledge concerning the side by which the sound comes to us, this is furnished by the auditive sensation on the right or the left, and also by the consciousness of the muscular efforts to perceive,—efforts which are made to find the maximum auditive sensation indicating the shortest distance between the source of the sound and the ear which listens. But it was necessary that this effort to perceive should itself be guided: so we find that the sensibility of the skin of the pavilion of the lateral portions of the neck, and of the face, brought into play by the sound-wave, also gives indications as to its direction. This is the opinion of distinguished physiologists, such as Weber, Schneider, and Voltolini. Hartman and others go further; according to them it is to the sensibility of the tympanic membrane that the notion of exteriority of the sensation of sound must be attributed. The cutaneous surface of this septum, being struck by the sonorous current, is said to give the sensation of the shock of the sound-waves, and thus the sentient being is notified of the direction and of the source of the sound. Nobody has denied these allegations; but, like Béclard, many thought that the effort to perceive direction was better explained by the consciousness of the movements of the head and of the body in seeking for the maximum intensity of the sound. Dr. Gellé purposely omits examining the part which the pavilion plays as a screen in this effort to perceive direction, and which has been so well brought into evidence by Küss and M. Duval.

The author was able to study this subject and, he thinks, to resolve the problem on two patients in Professor Charcot's ward. The part which the sensibility of the tympanic membrane plays appears very clear. The first patient was a man suffering from general anæsthesia of the skin, with trembling and want of co-ordination in walking, but whose intellect, as well as his sight and hearing, had remained intact.

The anæsthesia was so perfect that a piece of ice placed in the hollow of the ear produced no sensation whatever; the organ remained likewise insensible to ether-sprays or to the infliction of deep wounds made with the point of a needle. Both drum-heads were touched with a needle while the effect was observed by means of a mirror and a speculum. It was found that the membrane might be touched and pricked without the patient's perceiving the least sensation either of pain or of contact; on both sides the anæsthesia was complete. The patient's audition was good, and he heard and replied perfectly well whether he were spoken to by any one in front of him or behind him. Here, then, was a proper case for the study of the sensibility of the tympanum in the perception of the direction of sound.

Placing himself behind the patient, M. Gellé directed him to close his eyes, and then held his watch within a few inches of his right, and then of his left ear. The patient replied that he heard the ticking, but when asked on which side, he found it impossible to say with his eyes closed. The experiment was repeated several times in the presence of M. Charcot, and always with the same result. It may be permitted to conclude that the sensibility of the tympanum plays a serious part in the effort to perceive the direction of sound. In the ward were found several other patients suffering from general anæsthesia. M. Gellé pursued his inquiries upon them, and found that every time a patient could distinguish on which side the watch was placed the membrane retained its sensibility. It is therefore evident, he concludes, that the sensibility of the tympanum is brought into play by the vibratory current, and out of this grows the sensation of exteriority and that of the direction of the sound.

MUSCULAR CONTRACTION AND ANIMAL HEAT.—At a recent meeting of the Biological Society, M. Quinquaud described the result of his experiments on muscular contraction and animal heat. It is well known that since the beginning of this century animal heat and muscular contrac-

tion have been carefully studied. Many points still remain obscure: it is therefore desirable to provoke with facility and to vary at will the production of heat in a living being.

Here is an experiment which answers to this desideratum. By the aid of an induced current of which the intensity was determined, the muscles of a dog's leg were stimulated twice every second during three-quarters of an hour. After from five to six minutes' stimulation, the rectal temperature began to rise; the rapidity or slowness of the increase of heat varied within certain limits according to the species of animal. The animal was considerably excited; its respiration increased; from twenty-two a minute it rose to one hundred and twelve and one hundred and twenty; it became irregular after the cessation of the current. The animal was muzzled, but breathed easily through the mouth and nostrils.

M. Quinquaud made another experiment, which is as follows. A dog of twelve kilogrammes, with a rectal temperature of 39.4° Cent. (102.6° Fahr.), was submitted to electrization during thirty-five minutes. After an interval of twenty minutes the thermometer marked 41° (105.8° Fahr.). The respiration was increased to 108 during the electrization, and afterwards the dog was in a panting condition, as it might have been after a long run; the electric stimulation was continued during three-quarters of an hour, but after its cessation the animal continued to pant violently; death ensued two hours after the beginning of the experiment, with a temperature of 42° (107.6° Fahr.). The venous blood on the side which had been subjected to electric stimulation contained 0.70 gramme of glucose; the side which had not been subjected to this influence contained 1.20 grammes of glucose.

In a second experiment, a dog weighing seven kilogrammes, rectal temperature 39.7° (102.9° Fahr.), the muscles of the right leg were submitted to electric stimulation. At the outset the animal passed urine and excrement. This urine was obtained for analysis. Fifteen minutes afterwards the rectal temperature was 41.1° (105.9° Fahr.); twenty-five minutes later it became 41.7° (106.5° Fahr.); the respiration was 112, the agitation moderate; the electric stimulation lasted half an hour; the dog remained in a panting condition during the whole evening, as if it had run in a fierce sun. The experiment was made at 11 A.M.; the next morning the animal had recovered. Venous blood on the side subjected to electric stimulation contained 0.75 gramme of glucose; on the other side 1.15 grammes of glucose.

The third experiment was on a dog weighing six kilogrammes, which had been already subjected to several electrizations, with a normal rectal temperature of 39.5° (102.7° Fahr.). At 10.38 A.M. the electrization was begun, and at 10.48 the rectal temperature was 39.9° (103.1° Fahr.); at 11.2, 40.1° (104.1° Fahr.); at 11.35, 40.7° (104.7° Fahr.); and at 12 o'clock, 41.4° (106.2° Fahr.). In this experiment the increase of heat was slow; the temperature increased progressively, as in the other experiments; the animal remained in a panting condition for seven or eight hours, and ended by recovering itself; but if the experiment had been continued, it would doubtless have succumbed.

These experiments are interesting by virtue of the following considerations. It is curious to see a localized muscular electrization engender a condition of general hyperthermia; the possible cessation of life some time after electrization; death resulting partly from the increased heat; the greater destruction of saccharine matter on the side where the artificial muscular contractions were produced; and the possible therapeutic applications in cases of refrigeration. It is an experiment easily repeated.

M. Quinquaud, at a future meeting of the Biological Society, will indicate the disturbances caused in the different functions of the organism and the mechanism of death.

PERILS OF SCHOOL-LIFE.—M. Lagneau presented to the Academy of Medicine a report upon cramming of young children at school and the evils which it has in train, and concluded by declaring that the "Academy of Medicine calls attention of the public authorities, the Ministers of Public Instruction, of War, and of the Navy, to the utility of opposing the intellectual cramming and sedentary life in schools, and to the necessity of modifying the course of instruction so as not to burden the minds of young children."—*La France Médicale.*

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, AUGUST 6, 1887.

EDITORIAL.

SEA-AIR AND SEA-BATHING.

AS, year by year, the popularity of our sea-side resorts steadily increases, the problem of how to get the most benefit to health from a visit to the sea-shore becomes of more general interest. It is quite evident, from the habits of the people, that public opinion has not as yet crystallized upon this subject. It would be a matter of surprise, were it not one of common observation, that, among those who leave home in ordinary health to spend a few weeks in recreation at the shore, attacks of sickness are so common. In a small hotel it was recently noticed by an odd coincidence that seventy persons were sick at one time with diarrhœa or symptoms of summer cholera. In the case referred to, as in most summer-resorts with any claims to respectability at the present day, due attention had been paid to the drainage and water-supply. Moreover, the fact that the disorder referred to was not confined to one locality, but was general, points to a wide-spread cause. It is customary to ascribe such attacks to bad drainage, since so many sad illustrations have been furnished of disease and death due to criminal negligence of sanitary precautions; but attention has been directed to this with such force and persistency that a better state of affairs has been brought about, and most American summer hotels may now with reason be termed health-resorts.

A potent cause of such attacks at present seems to be in the habits of the people. The association of a large number of persons, like Mr. Gilpin, "on pleasure bent," inevitably leads to a constant round of excitement, which affects the equilibrium of the nervous system and reflexly tends to impair nutrition. The change of air and scene stimulates the appetite, while the abundance and variety of the fare tempt to over-indulgence at the table. Bathing is often undertaken too soon after eating. In consequence, digestion is interfered with, the blood is driven from the periphery to the internal organs, and the mine is laid for an attack of acute gastro-intestinal indigestion, with prostration, vomiting, and purging,—making a colorable imitation of an attack of cholera morbus. Moreover, bathing, fishing, and crabbing, often with both the direct and reflected rays of the sun beating upon the unprotected head and shoulders, may cause a severe meningeal congestion, or possibly sunstroke, particularly if there has been, as is very often the case, more or less indulgence in alcohol.

The active factors in the use of baths at the sea-side are summed up by Leichtenstern as follows: 1, the cold bath; 2, the salt contents of the water; 3, the motion of the water and the force of the waves; and, 4, the important factor of sea-air. As the cold baths cause a propulsion of blood to the internal organs, they should not be used by persons subject to hemorrhages of any kind: this explains the tendency to attacks of apoplexy during or after the bath. Very anæmic and lean persons do not bear cold baths well, on account of their deficient heat-making power. Such persons are much benefited by the heated sea-water baths, or by sponge-baths. In anæmic subjects with a good supply of fat, suffering with irritable weakness or nervous dyspepsia, the sea-baths are decidedly curative; as they are also in scrofulosis of the pasty types. Patients suffering with nervous disorders of various kinds have received much benefit from sea-bathing; but it is doubtful if greater benefit be not obtained from the climato-therapeutic effect of staying at the sea-side. Consumptives of a nervous type

sometimes are greatly improved by the climatic influence; but if there is a decided catarrhal element present in the case, dyspnœa may be caused by the dampness of the air. Such cases should not be sent to the sea-shore, but to the mountains. Whether sea-bathing is permissible in pregnancy or not is dependent entirely upon circumstances,—the force of the waves, the temperature of the water, and the personal equation,—and no rule can be laid down other than the general principle that proper caution should be observed to prevent shocks or violent exercise.

In order to obtain the most advantage to health from a visit to the sea-shore, we would advise that the advantage of obtaining good rest at night, as a result of the comparative coolness and the sleep-inviting air, should be more highly appreciated, and that a regular hour for retiring be observed. A light breakfast, with little, if any, meat, is a good beginning for the day. Bathing should be undertaken only after a sufficient time has elapsed for the digestion of the last meal,—this would require probably at least three hours,—and at first the duration of the bath should not exceed twenty or thirty minutes. It would be advisable for those who are not very strong to postpone the sea-bath for several days or even weeks after their arrival, and confine themselves to warm baths or sponge-baths. It would certainly be wiser for invalids who resort to sea-bathing as a therapeutic measure to do so only under medical advice.*

Those who are wise enough to lead a well-regulated life at the shore will, with few exceptions, derive vigor and increased powers of resistance to disease from their vacation; those who are irregular and careless will generally return in poorer physical condition than when they left home, and with the conviction that the sea-shore does not agree with them.

* A little book by Dr. Packard, of this city, contains much useful information upon this subject. It is entitled "Sea-Air and Sea-Bathing." Published by Blakiston, Philadelphia, 1880.

THE TREATMENT OF CONTRACTED KIDNEY.

DROPSY no longer claims a place among diseases in our text-books, as it did in those of a preceding generation of physicians, the attention of the modern therapeutist being directed to the physical causes of this condition, and his skill is shown by his well-directed attempts to correct the disorder of the circulation which gives rise to the anasarca and serous effusions. In the management of that large class of cases in which crippled kidneys play a prominent rôle, it has been found by experience, moreover, that hygienic and sanitary considerations are relatively more important than the selection of particular remedies which have been thought to be more or less "indicated" by the disease.

Nothnagel, in a recent clinical lecture,† has pointedly directed attention to the fact that of the remedies made use of in *morbus Brightii* a great portion is given quite uselessly. In particular does he advise caution in the use of digitalis in contracted kidney, since an injudicious increase of pressure in the arterial system may produce rupture and cerebral hemorrhage. The therapeutics of chronic contracted kidney with granular atrophy is limited to intelligent dietetic measures, the leading principle of which should be to maintain normal diuresis. Since diuresis partially depends upon the tension of the artery, the cardiac functions must be carefully watched, and all those measures taken which are observed in cases of valvular disease of the heart. Excessive exercise, undue indulgence in alcoholic drinks, coffee, tea, or hot beverages, and emotional excitement, are to be forbidden. If the cardiac activity be reduced so that arterial

† On the Treatment of Nephritis. *Medical Press and Circular*, June 29, 1887.

tension is below normal, even though hypertrophy of the ventricles may exist, cardiac stimulants may be used, the most efficient of which is digitalis, which, after the caution already given, is understood to be a two-edged sword and employed only with circumspection. A milk diet, and suitable clothing, and residence in a warm equable climate, have been sufficiently dwelt upon by modern writers. If exercise bring about a marked increase of albuminuria it may be necessary to confine patients to their room. Bartels has had good results from restricting the patients to their beds for weeks or months. Subsequently, attention to maintaining the function of the skin by baths, massage, and warm clothing is most useful. If there be marked dropsical effusion, the use of pilocarpin and hot air baths is to be resorted to, with the classical diuretics (squill, digitalis, and potassium salts), to which calomel has been recently added by Jendrassik, who has directed attention to its decided diuretic effect, but it is liable to produce stomatitis and diarrhœa unless carefully watched. By the adoption of these means the prognosis of contracted kidney may be decidedly improved.

HOT WEATHER DRINKS.

VERY diverse views are held as to whether ice-water is wholesome in hot weather; or how much of it may be safely taken at once. Some avoid it *in toto*, and others swallow it wholesale. The first are apt to fall back upon beer, and the last are prone to cholera morbus. As in most other affairs of life, a happy medium is the true solution. Ice-water is good to drink, and it is by far the best assuager of thirst to be had in this torrid condition of both town and country; and although good beer in moderation may be serviceable in allaying thirst, it will never satisfy the longing for inward refrigeration so promptly or so safely as will cold water in reasonable amount. We no longer withhold ice-water from our fever patients, nor should we deny it to those who are in a feverish condition.

Acidulated beverages, such as lemonade or acid phosphate, with or without a pinch of cream of tartar, are alike pleasant and efficacious in allaying thirst and in keeping the kidneys active,—an important matter at all times, but specially so when people *will* eat as heartily of animal food in midsummer as in winter.

Good buttermilk takes the place nicely of the long line of "cocktails," "juleps," and the like, too often deemed necessary for the comfort of young men, while for children and their nurses it is both meat and drink during the hot weeks of summer.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

TREATMENT of Abortion in Paris.—Having followed the methods used in the hospitals here, and attended the recent discussion at the Société Obstétricale de Paris, we can give a few interesting points with regard to the system used here, where abortion is so frequent that Professor Tarnier says that it exists in one out of every four pregnancies.

First, as to its preventive treatment. The rule given is, "As long as an abortion is not completed,—that is, the products of conception expelled,—attempt may be made to prevent it." This is not a rigid rule, however, for certain cases are inevitable: as, for instance, when the fœtus is dead. When the membranes are broken and the amniotic fluid has escaped, it is almost inevitable, but not certainly so; because several cases are known where the fœtus has been carried to term when the waters had been lost weeks before. There is no reason to consider an abortion inevitable because there is a hemorrhage, and even when in the blood discharged one can recognize portions of the decidua, for pregnancy has been proved to have gone on without it. Even when the os uteri is dilated and a portion of the embryo protrudes, hope may still exist.

The preventive treatment can be summed up in two formulæ: 1st, require absolute rest, with dorsal decubitus in bed, *never on the sofa;* 2d, diminish the uterine irritability by opium. Laudanum may be given by rectal injections. Twenty drops are first tried in

one-quarter pint of water; this is increased to forty, fifty, sixty, and up to a hundred drops in the same quantity of water per twenty-four hours. Pregnant women possess considerable tolerance for opium, and hypodermic injections of morphine may also be given when rapid action is needed. The above simple treatment is all that is used here, anæsthetics and chloral not being in favor.

When the abortion is inevitable the treatment is different. It must be divided into the treatment of an abortion of the first eight weeks and those of the third and fourth months. As to the first, the indication is to fight the hemorrhage, and the simplest treatment is the best. It mostly consists of absolute repose and expectation, and there is a good deal more to say as to what ought not to be done than what ought to be done. As to the first, one ought *never* to use applications of perchloride of iron on cotton in the vagina, on account of the blood forming clots which are difficult to detach, and which may cause septicæmia, or at least complications such as metritis or perimetritis. As to ergot, all the Paris accoucheurs have made a rule never to give it as long as anything remains in the uterus. As to the other forms of internal medication, they are considered worse than useless. There is therefore but very little done except to keep up perfect antisepsis. Every four hours an injection is made into the vagina of a solution of boric acid (three or four per cent.) or corrosive sublimate (one to three thousand). Besides this, the vulva is covered with borated cotton (the only dressing used at the maternities here); carbolized cotton is likely to produce burns that are very painful to delicate skins. When the hemorrhage is very severe, the means used are two: first, injections of hot water (intra-uterine if the vaginal are not sufficient). These are made with sublimate as a rule, unless this produces diarrhœa symptoms, when it is changed to carbolic acid solutions. One part of corrosive sublimate to six thousand of water is usually enough, unless there is danger of septic infection; then as much as one to two thousand is used. The temperature should be 43° or 44° Centigrade. If the vulva become painful from irritation of the liquid, use the following application: vaseline, one hundred grammes; boric acid, ten grammes. Have the boric acid well pulverized and well rubbed, or it will form hard lumps in places. If the flooding still continues, the only means left is to use the tampon invented by Leroux, of Dijon. In using the vaginal tampon, many have no idea of the quantity of material that should be prepared beforehand. Professor Pajot used to say, "Remember to have as much as would fill a high hat," and this is no exaggeration at all. Some twenty to thirty large lumps of sublimated cotton are prepared, each one tied with a long piece of string, and one by one are introduced, filling the vaginal cavity until it extends back to the ischium. It must not be forgotten to be sure to have the bladder and rectum empty before commencing. The tampon is never allowed to remain for more than twelve hours.

Massage.—This subject is again the order of the day, and several surgeons, as well as the strictly medical men, are bringing the matter forward. Dr. Dujardin-Beaumetz gives some interesting details of its history. It was known to the ancients, having been spoken of in an old Chinese work called *Cong-fou*. In India it has been practised for ages, and they call it *chemboo*, from which we get our word "shampoo." The Greeks and Romans made much use of it. It is curious to cite a remark of Hippocrates in regard to a woman who had a hardness of the abdomen. He said, "It was violently kneaded with the hands covered with oil, and cured." It can be divided into two kinds: massage with apparatus and without. Four kinds of action are used. First, *effleurage* (to skim over). This consists in light passes of the hand, or only the fingers, over the part; it is what the Germans call "combing the flesh." Next is friction proper. Thirdly, *pétrissage* (kneading). This is done by raising up certain muscles and rolling them together, or else kneading them with both hands. The last form is called *tapotement* (to pat or slap gently). Here there is a division made into slapping gently the tissues or striking (*hachement*) them with the ulnar border of the hand. Not much importance is given to the various oils and fats used with the massage. A story is told of a quack who had a sure cure for hernia, which consisted of a certain secret pomade he sold; the point lying in the directions given, which consist of massage and a good bandage put on after the pomade is used. In honest practice vaseline is often used, more or less perfumed with drugs, which have but little to do with the success.

As to the applications of massage in surgery, all surgeons are now agreed that it is the best form of treatment for all sorts of sprain, but as to fractures there is a division of opinion. M. Marc Sée and some others are highly in favor of it, while Trélat is opposed to it. The point seems to be that it should be applied at once to be of use,—just as soon as the patient is seen,—and, if the fracture is open, it is not to be used at all, at least until the wound is perfectly healed. In gynæcology and obstetrics its practice is very restricted here. In all articular affections good results are obtained. As to massage in the neuroses, it has as yet but few partisans in France. In heart-disorders much is done to reduce œdema, and the same good results are obtained in constipation and dilatation of the stomach. It is almost certain that all the good effects of Aix-les-Bains are owing to the skilful use of massage, for the waters themselves are but slightly

mineralized. There the *masseurs* have their art handed down to them from father to son, and mother to daughter, for many generations back, and it requires this great experience. Before modern establishments make a success of massage, they must consent to study it as other arts are studied, and give a certain time of apprenticeship to it if they hope for much success.

Intellectual Overwork and Sedentary Life in Schools.—The Paris Academy of Medicine has been making some long and rather tall talk over this subject. It has perhaps been overdone, but the evil certainly exists. Dr. Brouardel said that, in his opinion, students did not only lose their health from too much work and sedentary life, but also from the very conditions of life in large cities. When they are young, boys in the large towns are extra bright; but let a few years go by, and, if they are called upon to do much intellectual work, we see that they fall away and end by an arrest of development of intellect as well as physique. In many of these cases the genital organs do not develop, and these young men resemble, both in the abdominal region as well as the thoracic, young women of the same age. They are a sort of reproduction of the fabled Ganymede; and this anatomical state is definite. They do not change much as they grow older. At first at school they astonish their families by the great aptitude they have for study; but as puberty approaches a great change takes place, and they generally take the downward road to arrive at nothing of importance. Dr. Brouardel spoke against the custom here of placing boys in boarding-schools and keeping them confined so closely. If such institutions must exist, let them be placed out of town, where the boys could be exercised in the pure air of the woods, and not by a melancholy walk about town. There is nothing more curious in Paris to an Anglo-American eye than the sight of the long strings of boys in a tight uniform coat of the college they belong to, walking slowly along, two by two, as demure as girls out with their mammas.

Professor Peter spoke in a later session this month, on the same subject, and called attention to the symptoms, particularly of headache, from overwork in intellectual pursuits. He said that it was a much-neglected symptom that might lead to pathological disaster more quickly than usually thought. It was the cry of the overworked brain, the voice of suffering of an organ fatigued that demanded rest. If this cry were not heeded, the brain would refuse to perform its usual functions, and the cerebral cells would go on a strike. Many of these young overworked children complain of headache, and are told that it is laziness; but it will reproduce itself the moment any reading or study is attempted. It is a sort of writer's cramp of the brain. M. Peter spoke of cases where the young subjects could take part in conversation, but the moment they went to books the headache returns, and very often with epistaxis. To this, later on, is added a sort of fever. A typical case is given of a young girl. The mother relates the case: "My daughter was nearly at the end of her studies for a diploma when she was taken with violent headache and bleeding of the nose, which was soon afterwards followed by fever; both her appetite and sleep soon left her. The family doctor suspected typhoid fever, and at once ordered rest; but for some time the symptoms returned. The superintendent of the school said that it often happened that her students had these symptoms, and she stated that four months of holiday was the only cure. In some cases over three years was required to re-establish them." M. Peter spoke in strong terms, condemning the close confined air of schools and the action it had in producing tuberculosis.

Hydrophobia.—Monsieur Pasteur having returned to Paris, it was expected that something would be done at the Academy in regard to the opposition made to his treatment by Professor Peter and others, and M. Pasteur took the opportunity in the last session to lay before his fellow-scientists a report of the commission appointed by the English Parliament to examine into his treatment of hydrophobia. As perhaps many of your readers will have seen, this report was quite favorable to the Pasteurian treatment, and M. Pasteur and those with him rejoiced over this fact in presenting the report.

Professor Peter, however, returned to the charge by stating that in January last he took occasion to direct attention to the danger of the form of intensive treatment then employed by M. Pasteur. He understood that since then it had been very much modified, and that now they do not dare to inoculate with three-day-old marrows; but, notwithstanding that there was a return to the first system, it seemed to him that it was just as inefficacious as ever. He presented as proof of what he said the case of a man named Hurot, who was bitten by a dog on the 29th of May last, who went at once to the nearest drug-store, where he had the slight wound carefully cauterized. Owing to the advice of some friends, he went to the Pasteur Institute the day afterwards, where in thirteen days he was inoculated eighteen times. Following this he went to his work, and felt no trouble of any kind until about ten days ago, when he was suddenly taken with a curious malady. Dr. Miquel being called, he recognized all the usual symptoms of hydrophobia, and sent the man to the St. Antoine Hospital, where he came under the care of Professor Hayem, and where he died in frightful agony. M. Peter called attention to the fact that the

incubation of hydrophobia was about thirty-five days, and that it was exactly this time since the man was inoculated, and he did not hesitate to say that it might be from the treatment followed by M. Pasteur.

M. Pasteur answered that his system was established in many places, and that it was confirmed by the English commission, and to prove that a man had died by it it would be necessary to inoculate animals with his medulla oblongata; but this proof was not given in any case. He said he did not wish to discuss the question with the person who just spoke (Professor Peter), as he did not think him clinically or experimentally competent.

Professor Peter answered that no one is incompetent who cited facts, and he wished to continue his argument, but was put off until the next meeting of the Academy. It is very difficult to judge of M. Pasteur's treatment, and whether he or M. Peter is right; but it will not take any one long to judge of the competency of Professor Peter to discuss any clinical matter much better than the eminent chemist who so carelessly denies his competency. M. Pasteur will not gain any friends to his method by this kind of talk, and will most likely regret having spoken as he did at this session, when he will again be sharply attacked by the great clinical master next week.

Ablation of the Ovaries for Nervous Disorders.—This question has just been brought before the Gynæcological Society by a paper presented by M. Lucas Championnière. There are three principal points in regard to it: 1st. Is there a relation of cause to effect between ovulation and menstruation? 2d. What is the prognosis of the operation? 3d. Is ablation of the ovaries, when they are healthy or diseased, to be authorized in nervous diseases?

1st. There are three different theories in regard to ovulation and menstruation: (*a*) that ovulation is under the dependence of menstruation; (*b*) that menstruation is under the dependence of ovulation; (*c*) that they are both under the dependence of the central nervous system. No matter what may be our opinion, there are certain facts that must be admitted. Menstruation is a function that has a periodical return, and ovulation does not of necessity follow it; it is independent of menstruation. This is based on clinical and anatomical facts. Leopold's work is based on the examination of ovaries taken from women who died during their menstrual periods, and he saw that he could always find Graafian follicles about to break or else already broken. The same observation was made by Lawson Tait, who operated between the monthly periods. M. Porak has given twenty-one observations where a single coitus was followed by conception; four times he could not get any information about the time; twice the connection took place near to the monthly term; but in the other fifteen cases it took place during various periods of the month; so that conception can take place at any time between the periods. The Jews, who are so prolific, separate from their wives during the eight days following menstruation. What, then, are the arguments worth which are given to support the idea that ovulation and menstruation take place at the same moment? A comparison is made in regard to the rut of animals; but this is only a hypothesis, for we do not know if any one has really seen the rupture of De Graaf's follicle during menstruation.

It is concluded then that ovulation is a permanent function, and menstruation a periodical one. It is not intended to say, however, that there is no connection between them, but that they are not dependent on one another. Does ablation of the ovaries cause menopause? Not always; but it does as a rule. Hegar thinks it does; Goodman is not so sure. M. Championnière, with most of the French surgeons, believes that in cases where the menopause does not occur all the ovarian tissues were not taken away in the operation. The final question is, Whether this operation ought to be done for nervous complaints or not? It has been proposed for certain forms of dysmenorrhœa, and for nymphomania. The solution of this question reposes on two things: first, the prognosis of the ablation; second, the amelioration of the nervous affection. M. Championnière mentions one death in three operations, which is not at all encouraging. He also cites Magnin's paper, containing seventy-seven cases with three deaths, but his statistics are not correct. Hegar gives sixteen per cent. Lawson Tait had twenty-five per cent. of deaths; but afterwards made one hundred and eight ablations with two deaths. Goodell in 1885 gave twenty-five cases and only one death. In any case it is a serious operation, and we must ask the question, What are the results? In nymphomania none. In hysteria a slight amelioration, but in general the results are negatives. Hysteria is certainly an affection of the central nervous system, and not at all dependent on menstruation. In dysmenorrhœa cure is often obtained, but there are cases that are only aggravated. In fact, this operation is one that should not be practised until all other means had been tried, and it is the opinion of many of our best obstetricians that many cases will be cured in time from more simple treatment than this extremely grave operation.

Preservation of Cadavers.—M. Bouchard, of Bordeaux, gives a new means of preserving dead bodies for anatomical use. He found that, owing to the warm climate of Bordeaux, they had more difficulty than else-

SUMMER REMEDIES,

Dispensed only upon Physicians' Prescriptions.

Cholera Morbus,
Cholera Infantum,
Summer Complaint,
Sick Stomach,
Diarrhœa,
Dysentery,
Colic,
—AND—
All Derangements of Stomach, Bowels, and Intestines.

ALKALINE ELIXIR RHUBARB COMP.

WITH PANCREATIN.

Composition—with physiological action.

Rhubarb.—A tonic, astringent, and stimulant to the muscular coats of the intestinal canal; influencing its secretory surfaces and associated glands.

Berberina and Hydrastia (Alkaloids of Golden Seal).—Relaxed and atonic conditions affecting the gastric or intestinal surfaces come under their curative influence without toxic effects.

Bicarbonate Potassium.—Antacid; corrects the acidity developed in the stomach and bowels in enfeebled states of digestion; increases the alkalinity of the blood and the oxidation and excretion of effete matters.

Pancreatin.—The albuminoid principle of the Pancreas;—promotes intestinal digestion; transforms starch into sugar and dextrine; converts proteids into peptones; emulsifies fat; curdles the casein of milk; and in general exhibits all the important functions of this organ. In the presence of an alkaline solvent this action is largely increased.

Ceylon Cinnamon.—Valuable in atonic conditions of the intestinal mucous membranes, with flatulence and diarrhœa.

Spiritus Vini Gallici;—Simple Elixir with Oil Mentha Piper. This menstruum will especially commend itself to physicians.

—SOLD IN ONE AND FIVE POUND BOTTLES.—

A Nutritive Tonic adapted to all forms of Nervous Diseases.

NUTRITIVE HYPOPHOSPHITES

[Syrup Hypo. Co. with Quinine, Strychnine and Manganese.]

Each fluid ounce contains:

Hypophosphite Calcium,	1 grain.
Hypophosphite Potassium,	1 1-2 grains.
Hypophosphite Iron,	1 1-4 grains.
Hypophosphite Quinine,	7-16 grain.
Hypophosphite Strychnine,	1-16 grain.
Hypophosphite Manganese,	1 grain.

—IN ONE AND FIVE POUND BOTTLES.—

Anodyne,
Carminative,
Astringent,
Antispasmodic,
Diaphoretic.

CHLORODYNE.

This is the well-known Chandler's formula, modified and improved after many years' experience in its manufacture. It is a valuable combination of well-known medicinal agents; especially indicated in all diseases of the gastro-intestinal tract.

THE WM. S. MERRELL CHEMICAL CO.

—SOLE MANUFACTURERS,—

CINCINNATI AND NEW YORK

The only Coca Preparation endorsed by the Académie de Medicine of France. | Used in the Hospitals, Cliniques and Public Institutions throughout Europe, and by the entire Medical Profession, since 1863. | Invariably uniform in its results since 25 years.

VIN MARIANI

(ERYTHROXYLON COCA.)

THE MOST EFFICACIOUS AND AGREEABLE OF TONICS AND STIMULANTS, AND WITHOUT ANY UNPLEASANT REACTION.

FORMULA.—VIN MARIANI is the concentrated extractive of the fresh leaf of ERYTHROXYLON COCA and an excellent special quality of Bordeaux Wine, each wine-glassful containing the medicinal properties of thirty grains of the fresh *selected* leaves.

DOSE.—Usual dose is one wine-glassful about half an hour before or *immediately after* each meal; for children, half the quantity.

FOR twenty-five years **"VIN MARIANI COCA"** has been introduced exclusively to the **Medical Profession,** and has invariably given them uniformly good results in their practice. As a strengthener of the nervous system, with especial good effect on the respiratory and digestive organs, it is pronounced superior to any other adjuvant. Owing to the large demand for Vin Mariani, imitations and substitutions are being forced on patients where physicians do not especially specify

"VIN MARIANI,"

and we would respectfully call attention to this fact, as being the cause of failure to secure good effects in many cases where Coca is prescribed.

☞ TREATISE, 53 pages (translated from the French), will be sent gratuitously and post-paid to any Physician mentioning this Journal.

Price for Vin Mariani is reduced; and where druggists do not keep it, we will supply it to patients by the case of twelve bottles for twelve dollars. Remittance in all cases must be sent with the order.

To physicians, for their own use, a discount will be made.

MARIANI & CO.,

PARIS:
41 Boulevard Haussmann.

127 FIFTH AVENUE,
NEW YORK.

Correspondence from Physicians solicited.

where, and made many experiments to improve the methods used, with the result of finding one that acts very well; so much so that they were able to keep subjects for two months without the slightest signs of putrefaction or smell of any kind. The muscles and tissues keep their normal color and consistence, and the anatomical elements are not altered. Every one knows how the nervous centres get soft and useless for the purposes of study; but with the present preparation it has been possible to extract firm brains after three weeks' preservation of the body. The following is the formula used: borate of soda (which is hydrated to ten equivalents of water), ten kilos; to this add seventeen kilos of glycerin at 30° Baumé. The materials must be of the best quality, and they are prepared as follows: 1st. Reduce the borate of soda into a fine powder, and pass it through a sieve, No. 0. 2d. Put it into a large receptacle, and mix in the glycerin slowly to prevent lumping. 3d. Heat all up to a temperature of 80° Centigrade until the borax is dissolved; it should be constantly stirred. 4th. Pass it through a flannel sieve. The liquid will be now in a syrup, and it must be thinned with alcohol in order to inject it. The injection is made by the carotid or the femoral. If in this last, be careful to inject below the origin of the profunda femoris. For all subjects that have had an autopsy made, inject the members and plunge the trunk into a bath of the alcoholized, borated glycerin for twenty hours. Since using this method, M. Bouchard says that the students who cut themselves do not experience any symptoms of poisoning, and besides they do not any longer suffer with gastro-intestinal affections.

Strophanthus hispidus.—Since Fraser spoke of this medicine a good deal has been said about it, but so far the experiments made with it have been restricted here, owing to the high price first charged for the drug, and also owing to the fact that such men as Professor Germain Sée and others wanted to get the alkaloid. M. Hardy, of the Hôtel-Dieu laboratory, has made a little of it, but it is too soon to speak with certainty of the results of the experiments at that hospital in M. G. Sée's service. The plant, it seems, was first brought to Europe by Livingstone in 1865. The solution in water, one to one thousand, was tried in subcutaneous injections, but it produced a serious inflammation of the skin, and its use was abandoned. The best preparation we have been able to get so far is the alcoholic tincture, which is given three times a day in five-drop doses. In all troubles consecutive to the affections (primitive or secondary) of the heart-muscle, strophanthus has been pronounced a great success. The pulse gets fuller and stronger; its frequency is diminished from twelve to forty pulsations per minute; respiration becomes more quieted, more profound, and less rapid; diuresis augments to sometimes six or eight times as much as before its use. The action is durable and persistent, keeping up so far for three or four months. The medicine seems to be particularly useful in Bright's disease, being preferable to digitalis here, as it raises the amount of urine without increasing the blood-tension, as digitalis does. It does not seem to have any action over fever at all; but the patients get better quicker under its use, and do not seem so depressed. Later we will be able to give more definite results as soon as the alkaloid (strophantine) itself comes into use.

Wounds of the Intestine by Firearms.—The Paris Surgical Society this winter had a considerable discussion over this subject, and Professor Trélat with others took up what may be called the American mode of treatment. This has been very ably put forward in a thesis just presented for the *doctorate* at the Faculty here by an English physician, Dr. J. H. Barnard, who kindly forwards us a copy of his work. He cites the opinions of Gross, Hamilton, Bull, Otis, Nancrede, T. G. Morton, and others, and concludes that opium treatment with expectation is useless; and that the moment we are brought into consultation with such cases we must at once make preparations to perform laparotomy on the median line (*linea alba*); and that the operation has the more chance of success the quicker it is done. He says that, according to Morton, the lapse of time when the operation was successful was seven hours, but those without success over twenty-three hours. This matter is so essentially American in its treatment that nothing more need be quoted to your readers from this interesting thesis.

THOMAS LINN, M.D.

PARIS, July 8, 1887.

PROCEEDINGS OF SOCIETIES.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

THE Fourth Annual Meeting of the Association was held in the Johns Hopkins University, Baltimore, Maryland, May 31 and June 1, 1887, the President, Dr. Frank Donaldson, Sr., of Baltimore, in the chair. The President's Address was on the subject of the

PROPHYLACTIC TREATMENT OF THOSE WHO INHERIT A PREDISPOSITION TO PHTHISIS.

The great mortality of phthisis is well known, but statistics lately compiled show a decrease in the annual mortality both in this country and abroad. In Massachusetts there has been a gain of fifty-four lives per one hundred thousand. It has been shown that thirty per cent. of the cases have an inherited

predisposition, and this hereditary form, when developed, offers the least prospect of recovery. Nearly all observers have now accepted the views of Koch. There is abundant evidence that human subjects readily yield to the bacillar poison when previously they have been in perfect health. This bacillus is always present in phthisis, and we must accept it as the full explanation of the manifestations of tuberculosis. The disease may be propagated by the inhalation of the dried bacillus from the expectoration of diseased persons by persons predisposed to tuberculosis. The prophylactic treatment embraces two elements: (1) the improvement of the general health of the subject, and (2) the protection from contagion. Tuberculous mothers should not nurse. If possible, the child should be given to a healthy wet-nurse. The hygiene of the nursery should be looked after carefully. The room should be well ventilated and kept at a comparatively low temperature. The subject should live much out of doors, especially between the ages of fifteen and twenty years. The beneficial influence of sunlight should be borne in mind. All causes of glandular irritation should be avoided. Scrofulous glands should be dispersed or removed. The physical form of the chest should be enlarged by gymnastic movements. If possible, life should be passed in a high altitude. Oleaginous fluids are useful if they can be digested. The milk and flesh of tuberculous animals must be avoided, for cooking rarely destroys the bacilli of beef. If the prophylactic treatment is thoroughly carried out, the hereditary proclivity may remain latent permanently.

DISCUSSION.

Dr. James C. Wilson, of Philadelphia, endorsed the view that pulmonary tuberculosis in all its forms is in all probability an infectious parasitic disease directly contagious.

Dr. B. F. Westbrook, Brooklyn: The anatomical and physiological conditions which predispose to this disease are, according to the results of observations, a disproportion between the size of the heart and the lungs, the heart being smaller in proportion to the size of the lung than in the ordinary individual, and a disproportionately small digestive apparatus. The former condition interferes with the circulation at the apices, while the latter condition causes a defective nutrition.

THE PHILOSOPHY OF CLIMATIC TREATMENT OF DISEASES OF THE CHEST. BY JAMES R. LEAMING, M.D., OF NEW YORK.

It is observed that during the first three weeks of the patient's stay at a new place the greatest improvement usually takes place. The suggestion was made that a line of resorts be established along the Atlantic seacoast. The patient could begin in the summer at the most northern and gradually pass southward, making a stay of a few weeks at each place. Having completed the series, the patient may return, taking the stopping-places in a reverse order. This same plan might be applied to the Pacific coast and to the mountains. The speaker also suggested the propriety of State and municipal authorities furnishing sanitariums for the poor.

THE INFLUENCE OF SEA-AIR ON SYPHILITIC PHTHISIS. BY DR. R. G. CURTIN, OF PHILADELPHIA.

The histories of five cases of what appeared to be syphilitic phthisis, in which improvement followed prolonged sea-voyages, and in each case of which the symptoms returned when the patient again took up his residence on land, formed the basis of this paper. He considered the cases observed as cases of syphilitic phthisis for the reasons that there were no symptoms of chronic pneumonia preceding the attack, that the lung-disease followed syphilitic infection with constitutional symptoms, that the disease was influenced to some extent by constitutional treatment, and that there was no tendency to tuberculosis in these cases. He referred to the observations of Dr. William Porter, who relies upon the following points in reaching a diagnosis of syphilitic phthisis: 1, abundant expectoration without signs of softening; 2, a debilitated condition without marked emaciation and a rational history of phthisis; 3, pronounced dyspnœa without evidence of cardiac or pulmonic obstruction to the circulation; 4, pain along the sternum and the tibial crests; and, 5, the satisfactory response to treatment. Dr. Porter had examined the sputa in one hundred cases without finding the bacillus. The speaker was not prepared to say why it was that the sea-air proved beneficial in these cases, contrary to experience in the ordinary cases of phthisis.

A paper by Boardman Read, M.D., of Atlantic City, on

DISEASED CONDITIONS FOR WHICH SEA-AIR IS OF DOUBTFUL BENEFIT,

was read by title.

A general discussion followed.

Dr. James C. Wilson, of Philadelphia, said that there are three classes of patients with consumption who cannot go to our exposed Atlantic sea-coast without risk. These are—first, those in whom there is active febrile disturbance; secondly, those of a highly excitable and nervous organization; and, thirdly, those who suffer from repeated attacks of spitting of blood.

Dr. Frederick C. Shattuck, of Boston: The author has referred to syphilitic phthisis,—that is to say, a destructive process in the lung not due to tubercle, but to the syphilitic

virus. It seems to be a difficult matter to determine whether or not there is such an affection. Tubercular phthisis varies so much in its symptoms that the points mentioned cannot be relied on. It seems that the criterion would be the presence or absence of the tubercle-bacillus. The author referred to Dr. Porter as having examined the sputa from one hundred cases of supposed syphilitic phthisis without finding the bacillus. That number is so large for the short time that this test has been available that it would make us a little doubtful of the methods employed. The fact that the bacillus is not found is no proof that it is not present. The German Committee on the Collective Investigation of Disease studied this matter last year and came to the conclusion that so-called syphilitic phthisis had no real existence. Both syphilis and tuberculosis are common diseases, and the one offers no immunity from the other, so that we should expect to frequently find them combined in the same individual.

Dr. J. H. Musser, of Philadelphia, said that he had never seen a case of phthisis which he considered of syphilitic origin. In the post-mortem room he had come across only one case in which the lesions bore any resemblance to what we should expect to find in syphilitic phthisis. This was the case of a young man with syphilis and cirrhosis of the liver due to syphilitic interstitial hepatitis. There were also syphilitic gumma in the brain, and the patient died of syphilitic meningitis. There were scattered through both lungs innumerable miliary granules not at all resembling miliary tubercles. These were solid bodies made up of a yellow core, which was moderately firm and surrounded by a ring which made up at least one-half of the nodule. The microscopical examination showed these bodies to consist of a ring of firm fibrous connective tissue, in the centre of which there were degenerating cells. We were unable to find the bacillus of phthisis, but, as has already been stated, the failure to find it is no proof of its absence. He would not call this a case of syphilitic phthisis, but rather a case of syphilis of the lungs.

Dr. E. Fletcher Ingalls, of Chicago: I have been much interested in the remarks of the gentleman from Boston, but I apprehend that most of us had seen cases in which the syphilitic nature of the disease admitted of no question. Even if the bacilli are found, it would be no proof that the case had not originated as a syphilitic disorder and that it had subsequently become tubercular.

THE TREATMENT OF THE FINAL STAGE OF PHTHISIS. BY DR. J. H. MUSSER, OF PHILADELPHIA.

This contribution consisted of a detailed account of the symptoms met with in the last stages of phthisis, and referred to the various measures which he had found useful in these cases. To relieve the high temperature he had resorted to antifebrin with advantage. Quinine was found to act unsatisfactorily.

In the evening a paper entitled

CAUSES OF CARDIAC FAILURE IN HIGH ALTITUDES

was read by Dr. Frank Donaldson, of Baltimore.

The important fact that there is often great dyspnœa and sudden cardiac failure on going to high altitudes has not been sufficiently emphasized. Many patients are sent for general or special reasons to high altitudes, and are thereby done great injury, especially if they suffer from any form of functional or organic heart-disease. From some experiments with the pneumatic cabinet the author had come to the conclusion that this treatment should not be employed in cases in which there is any valvular disease of the heart or fatty degeneration of its walls. Before being subjected to treatment in the cabinet, an examination of the heart should always be made. It has been asserted that the cause of the cardiac failure in ascending to high altitudes is want of oxygen. The speaker had performed certain experiments with reference to this point. At altitudes within ten thousand feet there is sufficient oxygen to supply the hæmoglobin. In ascending to high altitudes the pressure of the air within and without the lungs is the same, but on the heart the action is different. The pressure is removed from the outer surface of the heart, while the internal blood-pressure remains the same. There consequently must be dilatation of the heart-walls. This, in the author's opinion, was the cause of the heart-failure under these circumstances.

DISCUSSION.

Dr. B. F. Westbrook, of Brooklyn: I have no doubt that the explanation of the author with reference to the effect of high altitudes on the heart is correct, but in the pneumatic cabinet the conditions are different. Where the patient inhales compressed air or sits in a rarefied atmosphere and inhales air at the ordinary pressure, there is an absolute or relative increase of pressure within the thorax. The heart is, therefore, submitted to a relatively increased pressure. As a matter of practical experience, he had found that patients with mitral stenosis or mitral regurgitation with pulmonary congestion can be put in the cabinet with safety. He should hesitate very much before putting a patient with aortic regurgitation into the pneumatic cabinet. In mitral disease, however, the tendency is to assist rather than exhaust the diseased heart.

Dr. H. F. Williams, of Brooklyn: Certain New York observers have claimed that in weak heart, particularly the "tobacco heart," they have obtained with the pneumatic cabinet an

effect similar to that of digitalis, due probably to a stimulation of the circulation through the coronary arteries.

Dr. S. S. Cohen, of Philadelphia: The heart is habituated to a certain pressure of the atmosphere (seven hundred and fifty-four millimetres of mercury). When the individual goes into a rarer atmosphere there is a disturbance of the relationship between external and internal pressure, and this disturbance will necessarily bring disease upon the patient. The inhalation of compressed air in cases of dilated heart has been recommended for many years by Waldenburg and others. He had recently employed this measure with beneficial results in alleviating the dyspnœa and defective circulation due to a dilated heart.

Dr. James T. Whittaker, of Cincinnati, Ohio: The condition met with in a rarefied atmosphere cannot be compared with that met with in the pneumatic cabinet. It does not seem possible to exert any mechanical pressure upon the heart in the cabinet. The conditions which have been observed admit of easier explanation by a study of the effects on the surface vessels. When the pressure is removed from the superficial vessels, the dilated heart propels the blood easier than before. This is one of the most efficacious means of treating irregular heart. He had used the cabinet for two years and had seen no ill effects from its use, although patients with advanced cardiac disease should not be subjected to this plan of treatment.

SOME HOSPITAL CASES OF PHTHISIS—MARKED IMPROVEMENT UNDER GENERAL TREATMENT, WITH SPECIAL REFERENCE TO ALIMENTATION. BY DR. F. C. SHATTUCK, OF BOSTON.

The cases reported in the paper had been treated in the Good Samaritan Hospital, devoted to the care of chronic diseases. Many of the patients had previously been exposed to unfavorable hygienic surroundings. The principal object of the treatment was the improvement of the general condition. Search had been made for a specific treatment. If the disease is of a parasitic nature, it is natural to suppose that such a treatment would be of avail. At present no such method of treatment is known. There are few individuals to whose lungs, at one time or another, the bacillus does not gain access. The fact that certain individuals are affected while others escape forces us to believe that there is a predisposition to the disease. The treatment employed by the author had consisted in relieving symptoms, improving the digestion, and the administration of as much food as the patient could take in the natural way. Artificial feeding had not been resorted to, but the patient was fed six or seven times a day. From two to ten raw eggs, with milk, were given daily to each patient. Alcoholic stimulants were not administered to these patients as a routine treatment, but were used only temporarily for special purposes. He had for several years been systematically cutting down the quantity of alcohol used in chronic cases, and had seen no reason to regret it. His experience had been that alcohol was not used with sufficient discrimination in chronic cases of diseases. Beef, milk, eggs, and other nourishing articles are more expensive than alcohol, but, if they can be consumed in sufficient quantity, they are more useful. In 1883 the amount expended per patient for alcoholic liquors had been two dollars and seventy cents, while in 1886 it had been only thirty-four cents. The patients received no injury, even if they were not benefited, by this reduction. Eight cases of well-marked phthisis were reported in which a decided gain in weight and general improvement resulted from the employment of the plan of treatment above described. About sixty cases had been under treatment.

DISCUSSION.

Dr. E. T. Bruen, of Philadelphia: Of the therapeutic measures under the control of the profession, diet, climate, and suitable hygiene are of principal importance. It is possible by climatic and dietetic treatment to so change the nature of the tissues that they shall not be suitable culture-media for the growth of the bacillus of tuberculosis. He wished, however, to refer more particularly to the use of the Bergeon method by the rectal injection of sulphuretted hydrogen. To antagonize the specific cause of the disease this method has been a failure, so far as his experience went. Since February last he had had under treatment by this method sixty-one cases. Systematic examinations of the sputa were made by Dr. E. O. Shakespeare. There had been no apparent reduction in the number or change in the character of the bacillus. This method should be classed among the available methods for the treatment of this disease. The good effects he had observed were reduction of temperature, reduction of expectoration, very often a complete suppression of bronchial catarrh, and relief of cough. This leads to improved digestion, and enables the dietetic treatment to be carried out with great thoroughness. Forty-four of these cases showed improvement to a certain extent, the average gain in flesh being about five pounds. In one-half of the cases the temperature has been brought to the normal, while in the remainder, although the temperature has not been brought to normal, it has been reduced two or three degrees. In fifteen cases the results have been negative, but in no case did any harm follow the use of this plan of treatment. The improvement has been most marked where there is a considerable catarrhal element. Those cases in which there has been more or less thickening of the lung,

with the general symptoms well marked, wasting, loss of flesh and weight, without much rise of temperature, he found not specially benefited by the injection of gas. In a post-mortem in one case which had been subjected to this treatment, although the cavities in the lungs were unusually clean, he did not observe any evidences of cicatrization. He had not found strong solutions at all satisfactory. The best results have been obtained from a solution of five grains of sulphide of sodium with five grains of chloride of sodium in one and a half pints of water. He did not consider it desirable to administer more than a gallon and a half of gas at one time, and insisted that the injection be made slowly, and that one-half to three-quarters of an hour should be occupied. He had not derived as much satisfaction in the treatment of the various forms of phthisis to which he had referred from any other method as he had from the injection of sulphuretted hydrogen. He always tested the breath for the presence of sulphuretted hydrogen, and had negative results in at least eight out of every ten cases.

Dr. S. S. Cohen, of Philadelphia: The experience of Dr. J. Solis Cohen and myself differs in some respects from that of Dr. Bruen. We have obtained the most decided benefit from strongly-impregnated waters. The best results were obtained in those cases in which the patient had a decided taste of sulphuretted hydrogen, which continued for two or three hours after injection. The best effect has been obtained in those cases in which suppuration is about beginning. Bergeon states that the treatment is directed especially to the suppurative process. In employing this measure, great attention must be paid to detail. In about fifty per cent. of the cases the condition has been greatly ameliorated; in another twenty-five per cent. there has been slighter amelioration; while in the remaining twenty-five per cent. there was more or less benefit to certain symptoms. He had seen no case in which no results were obtained.

Dr. James T. Whittaker, of Cincinnati, has for a month used sulphuretted hydrogen by inhalation, having previously employed it for a month by injection. He began the use of inhalation carefully, and, finding it well borne, had pursued the method more boldly. He now puts the patient in the cabinet and allows him to have all the gas he will take. It has produced no unpleasant results in any case. The effects obtained have been about the same as those resulting from injection. In about one-third of the cases there were no results. After searching the literature for records of bad results following the use of sulphuretted hydrogen, he had found only two in which a fatal result followed. It has been asserted that the good effect is due to the carbonic acid; but he was entirely incredulous of the effect of this agent.

Dr. Roland G. Curtin, of Philadelphia: It has been recommended by Dr. H. C. Wood that the sulphuretted hydrogen be taken by the stomach, using a saturated solution through which carbonic acid has been passed. He had tried this in four or five cases, and has had the same effects as from injection.

Dr. J. H. Musser, of Philadelphia, had used the gaseous injections to a certain extent, but his success had not been as marked as some others'. His best results had been in two cases. One was a case of incipient phthisis, in which the patient gained thirteen and a half pounds in four weeks. The second case has gained eight pounds in four weeks, and has much improved in general condition. He attributed his want of good results in part to the want of enthusiasm on the part of those whose duty it is to carry out the details of the treatment.

Dr. F. C. Shattuck said that he had used the sulphuretted hydrogen gas, and in several patients it produced collapse in varying degrees, with weak pulse, nausea, vomiting, and headache. In several other cases, although the treatment was well tolerated, it produced no good effect. In one case of asthma with chronic bronchitis and emphysema, thirty-four injections of the gas were given. While the treatment did not disturb the patient, it did no good. With the use of the gas was combined the administration of iodide of potassium and other remedies, and the patient recovered in about the same time as on a previous occasion when the latter remedies were given and no gas used.

(To be continued.)

THE ASSOCIATION OF AMERICAN PHYSICIANS.

(Continued from page 683.)

DISCUSSION ON HEART-MURMURS.

DR. A. L. LOOMIS, New York, said that murmurs within the heart-cavities are due to many different causes. Many are obstructive, while others are due to the impinging of currents of blood upon each other in the heart. They are also due to the force with which the blood-current is carried from the heart into the vessels. They are also due to, or greatly intensified by, the condition of the blood. Occasionally they may be due to irregular action of the heart produced by nervous condition. The obstructive mitral murmurs referred to are of frequent occurrence in connection with aortic disease where there is dilatation and feebleness of heart-power, but on autopsy he had always found such changes in the mitral valves as seemed to account satisfactorily for the murmurs heard.

Murmurs may be readily produced during respiration, but where these murmurs have been persistent he had always found attendant conditions of anæmia and failure of the

right heart. It seems that the explanation is either a hæmic condition or failure of heart-power. As we study the cases more, we shall find that they are due not so much to changes in the valvular orifice as in the heart-cavity and in the heart-walls. Murmurs have very little pathological significance unless there are other changes associated with them. The worst cases of heart-disease have often the simplest and least distinct heart-murmurs.

Dr. E. T. Bruen, of Philadelphia, mentioned a case of anæmia in which the blood-corpuscles were reduced from the normal to one million eight hundred thousand, with a great reduction in the hæmoglobin. There was also great relaxation of the vascular system; so much so that when the arm hung down there was a venous pulse at the back of the wrist. This was attributed to relaxation of the capillary vessels to such an extent as to permit the systolic impulse of the left ventricle to force the blood through the capillaries into the veins. There was no venous pulse in the neck. In this case there were murmurs at each of the valves of the heart. As the anæmia improved and the crasis of the blood was restored, the venous pulse disappeared and the murmurs gradually lessened, and the man has now no murmur whatever. This case is corroborative of the view of the author that in anæmia the murmurs are due to some functional disturbance of the valves.

Dr. F. P. Kinnicutt, of New York, said that it had been claimed by certain observers that pulmonary systolic murmurs are transmitted from the mitral valve into the auricular appendage. The condition required that this may occur is said to be dilatation of the appendage, causing it to approach the chest-wall. In some anatomical examinations he had made a few years ago it was found that in the normal condition the auricular appendage was concealed beneath the pulmonary artery, and when fully dilated its tip only could be seen beyond the edge of the artery. It was even then one and a half inches from the internal surface of the chest.

Dr. F. C. Shattuck, of Boston: When auscultation was first introduced all cardiac murmurs were considered of bad omen. It was then discovered that many systolic murmurs were practically of no importance. We are now finding out that all diastolic murmurs are not of evil import, and that they may be transitory and functional. A murmur by itself is next to nothing; there must be something besides the murmur to make it of much importance. The author has stated that in anæmia there is a reduction in the quantity of the blood. Is not the reduction really more in the quality,—a corpuscular reduction and a reduction in the capacity of the corpuscles for carrying hæmoglobin?

Dr. Samuel C. Chew, of Baltimore, with reference to the diagnosis between aortic regurgitant and mitral direct murmurs, said that the diagnosis can usually be made by attention to the following points. An aortic diastolic murmur, although it may be intense at the apex, becomes manifestly louder as we reach the right side of the sternum in the second intercostal space. It will there occupy the whole diastole. If the murmur is mitral in origin it generally will be presystolic, and will be also heard in the scapular region. The aortic murmur is not apt to be heard in the latter situation.

Dr. Beverly Robinson, of New York, in acute strain of the heart not necessarily brought about by great muscular exertion, had occasionally observed murmurs which unquestionably had nothing to do with organic changes in the heart, and cannot be explained as due to any special modification in the blood. The murmurs seemed to be due to more or less acute dilatation or obstruction of the mitral orifice. These murmurs he believes have considerable prognostic importance; for, if they do not receive careful attention and proper treatment, the condition may progressively develop until a permanent lesion is occasioned.

Dr. Israel T. Dana, of Portland, mentioned the cases of two sisters, one 40 years of age and the other 33, whose mother died with organic heart-disease. Both of these sisters have had a mitral regurgitant murmur. In the older sister the murmur, after remaining for five or six years, disappeared. It remained absent for one or two years, and then returned, and has continued for the past two or three years. In the second case the murmur, after having been present for five or six years, disappeared, and has since remained absent. He asked if it were possible that a murmur connected with organic heart-disease should disappear with improvement of the health and reappear when the health again fails.

The next paper was by Dr. Hosmer A. Johnson, of Chicago, on

PNEUMATIC DIFFERENTIATION,

and was read by the Secretary. The author had compared the results obtained by the cabinet with those obtained by the Waldenburg apparatus, and he held that the former accomplished no more than the latter. The pneumatic cabinet he considered cumbersome and expensive, with nothing specially to commend it in the treatment of pulmonary diseases.

The last paper of the morning session was entitled

METHODS OF LITERARY RESEARCH. BY DR. JOHN S. BILLINGS, U.S.A.

The author referred to the best way of using libraries with especial reference to medical literary work. He also spoke of the great importance of carefully-prepared catalogues

of books, and especially of the work at the library of the Surgeon-General's Office, which deserves to be better appreciated by the profession.

Afternoon Session.

THE ANTIPYRETIC TREATMENT OF FEVER. BY H. C. WOOD, M.D., OF PHILADELPHIA.

The author, in order to make the matter as brief as was possible, had prepared certain propositions or conclusions, which he would read and then give what he thought to be the proof of their correctness. The first proposition was, "Fever is a disturbance of calorification in which, through the influence of the nervous system, heat-dissipation and heat-production are both affected. If there be a fever which is produced by the direct action of a poison independently of the nervous system, we have at present no proof of its existence."

If an animal's temperature rises, there must be a certain number of heat-units used in producing that rise. If the temperature falls, there must be a corresponding lessened production of heat. In his experiments the agent used to produce the fever has been the pyrogenic principle found in ordinary commercial pepsin. After the substance has been introduced, the animal is put into a calorimeter. The animals used in the experiments have been dogs. In the normal animal, heat-production and heat-dissipation are correlated functions. When the poison is injected, it is found that heat-dissipation increases at the time that heat-production is diminishing, so that the fall of temperature was in part the result of heat-dissipation and in part the result of diminished heat-production. It is impossible that there should be this wide disturbance of these two functions simultaneously, unless the poison which produces the fever acted upon some one central organ, and that must be the nervous system. McAllister, of London, while believing that fever is often produced through the nervous system, thinks that at times it may be produced by widespread tissue-change caused directly by the poison, his reasoning being that in the advanced stage of fever the temperature is higher than at the beginning. He says that the time when the poison is at its maximum does not correspond to the time when the fever is at its maximum. The objection to this argument is that we do not know that the poison of the disease is the direct cause of the fever. The poison which causes the disease in scarlet fever, etc., is probably not the poison which causes the fever. The latter is probably generated in the system.

Second, "Heat-production is regulated by a nervous apparatus, our knowledge of which is still imperfect. There is certainly an inhibitory centre which depresses or controls the production of heat. It probably does this by acting upon the trophic cells of the gray matter of the spinal cord. It is possible also that there is a centre which, when excited, increases tissue-change, but its existence has not yet been proven." The speaker then gave a résumé of the experiments which he had performed which in his opinion proved the truth of the above proposition.

Third, "Heat-dissipation is regulated through the vaso-motor system, so that vaso-motor paralysis is followed by an enormous loss of animal heat, and, under unfavorable circumstances, even by death from cold." If section of the cord is made in such a way as to get vaso-motor paralysis without destruction of the respiratory centres, the heat-dissipation rises enormously, and if the animal is kept in a temperature of 50° or 60°, it dies in a few hours of progressive loss of heat, but if kept in a warm chamber it lives for days. The cause of the rapid heat-dissipation is the dilating of the blood-vessels of the surface of the body.

If these remarks are applied to a study of antipyretics, it is seen that drugs may lower bodily temperature in health or in fever by increasing heat-dissipation. In this way all agencies act which cause vaso-motor paralysis. Antipyretics acting in this way may be called false antipyretics. Aconite, veratrum viride, and drugs of that class belong to the false antipyretics. Then it is conceivable that there may be drugs which act on heat-production through the inhibitory nerve apparatus of which mention has been made. Such drugs may for convenience be called true antipyretics. Whether or not there are any true antipyretics has, until recently, been a question which we have been unable to answer. With regard to antipyrine, certain experiments made in the University of Pennsylvania seem to give positive results. Care must be exercised in these experiments not to confound a normal defervescence with the action of the drug administered. In the dog the use of antipyrine diminishes both heat-production and heat-dissipation, the former being diminished more than the latter. It is probable that heat-production is primarily affected. The question arises whether this result is due to an effect on the circulation. He had found that antipyrine had no effect upon the circulation. The blood-pressure was uninfluenced by its administration. He therefore concluded that the action of antipyrine upon the bodily heat was entirely independent of any action upon the circulation, and the probabilities are of course that it acts through the nervous system. Beyond this our present knowledge does not extend.

Francis Minot, M.D., of Boston, read the next paper, on

THE TREATMENT OF TYPHOID FEVER BY ANTIPYRINE AND THALLINE,

based on the observation of twenty-four cases treated in the Massachusetts General Hospital, the object of the study being to

ascertain the proper dose of the drugs, their general and specific effects upon the patients, the results from their continued use as compared with those from their occasional employment, any unfavorable results, and the general effect of antipyrine and thalline upon the course of the disease.

The following conclusions were reached: 1. Both antipyrine and thalline have a remarkable power of reducing the temperature in typhoid fever. 2. In no case was the use of these refrigerants apparently followed by any unfavorable effect upon the course of the disease. 3. The general condition of the patient was more comfortable after taking antipyrine and thalline, which were often followed by sleep. 4. The refrigerant medication by antipyrine and thalline appears to have no specific or decided effect upon the course or issue of typhoid fever. It often contributes much to the patient's comfort, perhaps indirectly promotes his safety. 5. The effect of antipyrine and thalline in promptly lowering the temperature shows that the danger in typhoid fever does not consist in high temperature alone, and that the latter is rather an index of the violence of the abnormal condition which we call fever, though perhaps adding somewhat to the danger. 6. By the internal use of antipyrine and thalline all the effects which are claimed for the treatment of typhoid fever by the cold bath are readily obtained without the trouble and inconvenience of the latter method, and without exposing the patient to the dangers of exhaustion and shock consequent on the fatigue of removal from bed. 7. These remedies may be given without danger to the youngest patients in suitable doses, and, indeed, their beneficial effects are more decided and unfavorable consequences are less observable than with adults.

(To be continued.)

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting of the Academy was held May 5, 1887, the President, A. JACOBI, M.D., in the chair.

DONATIONS TO THE ACADEMY.

Dr. FRED. A. CASTLE, Treasurer of the Board of Trustees, acknowledged the receipt of seventy thousand dollars from Mrs. Hosack, as a building fund, given in honor of her deceased husband. Mrs. Hosack also gave ten thousand dollars, or as much thereof as might be necessary, to acquire a bed in Roosevelt Hospital to be known as the Hosack Bed, the occupant of which is to be a deserving physician; its control to be under the officers of the Academy.

It was announced also that five thousand dollars had been received for a library fund, to be known as the Philippine Meyer and Ernst Jacoby Library Fund.

A memoir of Dr. H. P. FARNHAM was read by Dr. P. A. MORROW.

ON THE ULTIMATE RESULTS OF THE MECHANICAL TREATMENT OF HIP-JOINT DISEASE—AN ANALYSIS OF FIFTY-ONE CASES OCCURRING IN THE NEW YORK ORTHOPÆDIC DISPENSARY AND HOSPITAL.

The paper was by Dr. NEWTON M. SHAFFER, of New York, and Dr. ROBERT W. LOVETT, of Boston. Dr. Shaffer read the paper.

The more conservative methods of treatment had not received the attention they should. The object of the paper was to show the results of such treatment. The cases were drawn from the dispensary class only. Private cases, those from the hospital, and those upon which exsection had been performed, were eliminated from the list. The object was to show the ultimate result of strictly-speaking mechanical treatment of hip-joint disease in dispensary patients. No case was considered which had not been under the care of the institution from the time of entry to the final discharge; no case was considered which had not been discharged cured at least four years prior to the investigation; no case was considered unless it showed unmistakable signs of disease at the time of the first examination; none was considered which had not been at least two years under treatment; none was considered which had not been seen or examined after the investigation was commenced; all cases coming under these exclusive conditions were classified and reported. These conditions, the writers thought, must satisfy even the most exacting critic.

From 1877 to 1882, seven hundred and seventy-eight patients with hip-joint disease were treated in the dispensary. During these five years one hundred and sixty-eight patients, or 21.59 per cent., were discharged cured; fifty died with disease dependent upon the hip-joint condition. It might be stated that many, if not all, of the cases were experimentally discharged as cured before they were entered as actually cured.

The general plan of treatment was as follows: the long Taylor traction splint was applied soon after the first examination; unless the recumbent position was necessary, or the disease was so acute as to demand rest, the patient was allowed almost unlimited exercise in the open air. He was to call at the dispensary every week or two. The aim of treatment was to overcome any mechanical disadvantage acquired before the treatment was commenced; to protect the diseased joint from traumatism; to permit the patient to have almost unrestricted out-of-door exercise; to maintain the best position of the limb, or reduce deformity to a minimum if anchylosis occurred.

In no case was any operative measure employed, except occasionally to open an ab-

WILLIAM R. WARNER & CO.'S DOSIMETRIC GRANULES.

The Dose is one Granule, and repeated to meet the requirements of the case.

As their name indicates, these Granules are *measured doses* of the alkaloids, metals, and metalloids in such definite and accurate proportions as may best meet the requirements of the physician.

The most perfect system of Dosimetry is that comprised in Parvules originally introduced by Warner & Co. four years ago, but Dosimetric Granules are intended to comprise such remedies as are new and such as are *proximate principles* not so frequently repeated in a measured time for all cases.

These Granules have been divided, according to the metric system, into strengths of half milligramme, one milligramme, and centigramme. In each instance, however, their equivalents are stated in *grains* or fractions thereof. Such a plan, we think, will easily familiarize the practitioner with the metric system for all practical purposes, and will commend itself at once to their recognition.

The selection of the list is based entirely upon the *physiological action* of these active or essential principles, and are therefore administered upon a rational basis, thus making therapeutics stand upon firmer ground than that which it has occupied or even still occupies, when compared with the advances which its sister sciences have taken within the last decade. Under the administration of these Granules, therapeutics partake of the character of a *specific* form of treatment.

The cutting short or strangulation of many acute diseases, while as yet in their incipient or formative stages, has not been sufficiently appreciated. That this is possible, the medical literature of the day affords ample evidence; but to accomplish it, treatment must be both scientific and energetic, *i.e.*, must be based upon the physiological action of drugs, and upon the action of reliable medications.

With such an intention these Granules have been prepared abroad (in France particularly, as suggested by Dr. Burggraeve). This method of treatment has met with success, and it will be a matter of no surprise that therapeutists in this country should be prompt in adopting it.

In the hands of the physician, and *his hands only*, these Granules are potent remedies, capable of accomplishing results far more quickly and certainly than the uncertain fluid extracts and tinctures, and far more pleasantly.

ACONITINE.....1-65 gr. (1 milligram).
Med. prop.—Nerve Sedative.

ACID. ARSENIOSUM.....1-65 gr. (1 milligram).
Med. prop.—Antiperiodic, Alterative.

ANTIMONII ARSENIAS....1-65 gr. (1 milligram).
Med. prop.—Alterative, Diaphoretic.

ARSENII IODIDUM.....1-65 gr. (1 milligram).
Med. prop.—Alterative.

ATROPINÆ SULPHAS....1-130 gr. (½ milligram).
Med. prop.—Anodyne, Antispasmodic.

BRUCINE.....1-130 gr. (½ milligram).
Med. prop.—Tonic.

CALABARIN SULPHAS..1-130 gr. (½ milligram).
Med. prop.—Spinal Sedative.

CALOMEL.....1-65 gr. (1 milligram).
Med. prop.—Alterative, Purgative.

CICUTINE HYDROBROMAS...1-65 gr. (1 mill.).
Med. prop.—Nerve Sedative.

CODEINE.....1-65 gr. (1 milligram).
Med. prop.—Hypnotic, Sedative.

COLCHICIN.....1-130 gr. (½ milligram).
Med. prop.—Sedative, Diuretic, Emetic.

DATURINE.....1-130 gr. (½ milligram).
Med. prop.—Narcotic, Anodyne.

DIASTASE.....1-6 gr. (1 centigram).
Med. prop.—Possesses the power of converting starch into sugar (of the grape).

ELATERINE.....1-65 gr. (1 milligram).
Med. prop.—Purgative.

EMETINE.....1-65 gr. (1 milligram).
Med. prop.—Emetic, Diaphoretic, Expectorant.

ERGOTINE.....1-6 gr. (1 centigram).
Med. prop.—Emmenagogue, Parturient.

FERRI ARSENIAS.....1-65 gr. (1 milligram).
Med. prop.—Tonic, Alterative.

HYDRARGYRI IODID. RUB....1-65 gr. (1 mill.).
Med. prop.—Alterative.

HYDRARGYRI IODID. VIR......1-6 gr. (1 cent.).
Med. prop.—Alterative.

HYOSCYAMINE.....1-130 gr. (½ milligram).
Med. prop.—Hypnotic, Antispasmodic.

KOOSINE.....1-65 gr. (1 milligram).
Med. prop.—Anthelmintic.

MORPHINÆ HYDROBROM.....1-65 gr. (1 mill.).
Med. prop.—Anodyne.

NARCEIN.....1-65 gr. (1 milligram).
Med. prop.—Supposed to influence the inferior part of the spinal marrow, diminishing sensation and mobility in the inferior extremities.

PICROTOXIN.....1-130 gr. (½ milligram).
Med. prop.—Narcotic.

PILOCARPINÆ.....1-65 gr. (1 milligram).
Med. prop.—Sudorific.

POTASSII ARSENIAS.....1-65 gr. (1 milligram).
Med. prop.—Alterative.

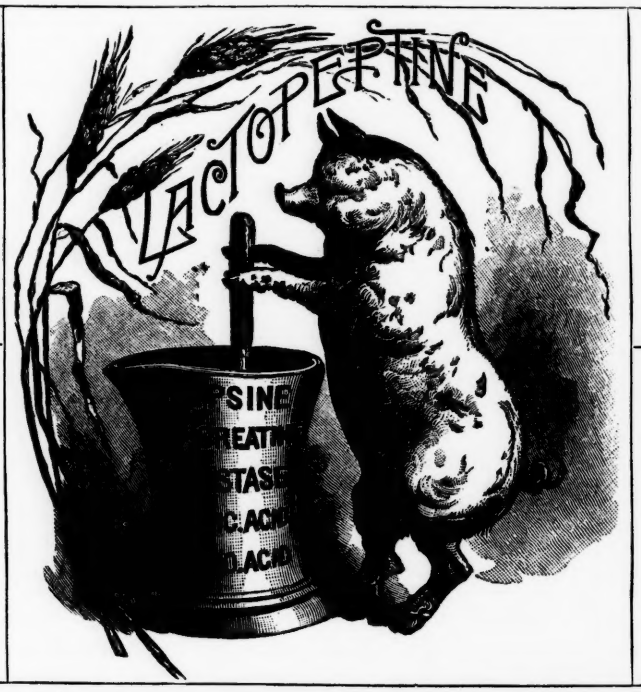
QUASSIN.....1-65 gr. (1 milligram).
Med. prop.—Tonic, Febrifuge, Anthelmintic.

WILLIAM R. WARNER & CO.,

PHILADELPHIA. **NEW YORK.**

LACTOPEPTINE is a skillfully prepared combination of Meat-converting, Fat-converting and Starch-converting Materials, acidified with the small proportion of Acids always present in the healthy stomach. It is a most valuable digesting agent, and SUPERIOR TO PEPSIN ALONE."—Prof. ATTFIELD, Ph. D., F.R.S., &c., *Prof. of Practical Chemistry to Pharmaceutical Society of Great Britain.*

The most eminent and successful Practitioners consider LACTOPEPTINE the Standard remedy in the treatment



of all those ailments in which deficient digestion is the direct or indirect cause of pathological conditions.

LACTOPEPTINE.

The most important Remedial Agent ever presented to the Profession for DYSPEPSIA, VOMITING IN PREGNANCY,

CHOLERA INFANTUM,

CONSTIPATION, *and all diseases arising from imperfect nutrition.*

LACTOPEPTINE IN CHOLERA INFANTUM.

We desire to direct special attention to the great value of LACTOPEPTINE in Cholera Infantum, and other intestinal troubles incident to the heated term.

Send address for our Medical Almanac, containing valuable information.

The New York Pharmacal Association,

P. O. Box 1574. **New York.**

scess, but abscesses were not interfered with, as a rule, unless there were positive indications for the knife. As a matter of experience, abscesses connected with hip-joint disease did no better under antiseptic conditions than those under simple incision, and neither did better than when opening took place spontaneously.

The long splint without any joint at the knee was used from the beginning to the end of the treatment. In private practice, where the patients could afford to pay for it, a splint with joints was employed.

Of the entire number of cases treated at the dispensary from 1875 to 1882, only fifty-one coming under the restrictions of this paper could be traced. Of these fifty-one cases four had died: two of meningitis, two of pneumonia. Six of the patients had had a relapse. They had been under treatment two and one-half, four, four, four, five, and seven years respectively; two remained well three years, two four years, and one five years before a relapse occurred. In one case the relapse was due to a fall from a cart. Of the cases which had relapsed one had afterwards entered a hospital for excision at the hip, two were still wearing the traction splint and were nearly cured a second time, one was on crutches slowly improving, the remaining two had been cured a second time by the traction apparatus. The remaining forty-one cases had been examined excepting two, which were well. Of the thirty-nine cases examined four had been under treatment two years, four for two and a half years, nine for three years, six for three and a half years, eight for four years, two for four and a half years, two for five years, one for six years, one for six and a half years, one for seven years, and two for eight years. Of the thirty-nine cases, the disease had lasted before they came under observation for a less time than six months in eight cases, between six months and a year in eighteen cases, between one and two years in three cases, between two and three years in five cases, six years in one case, seven years in one case, nine years in one case, and for an indefinite time in two cases.

Of the thirty-nine cases, twenty-seven had one or more abscesses at some stage of the disease; twelve had none, but the latter were by no means the least marked cases, or those in which the best results were obtained. There was shortening of the limb as much as one and a half to two inches in all of the cases excepting two; in these there was no shortening. The amount of shortening did not seem to depend upon the presence or absence of abscess. In one case there was six inches shortening. The two cases cured without any shortening were cured before the tenth year of age. Eighteen cases cured before the tenth year represented an aggregate of twenty-five inches shortening, while nineteen cases cured after the tenth year represented in the aggregate thirty-eight inches shortening. The shortening was principally in the femur; the tibia shared it to a certain extent. The difference between the length of the two limbs almost invariably increased slowly after the disease had been cured, but the shortening did not increase indefinitely. In the cases in which eight or ten years had elapsed between the two measurements, no greater shortening was present at the last measurement than existed two or three years after the cure.

In no case was the difference in the circumference of the two thighs less than one inch. It would appear there might be a maximum of muscular atrophy with a minimum of bone-shortening, and *vice versa*. It seemed the nutrition of the muscles, bones, etc., in hip-joint disease received a shock from which it never afterwards recovered.

In nineteen cases there was practically anchylosis of the joint: in twelve of these there had been abscess, in four no abscess; with slight motion there were four cases with abscess, two without abscess; from ten to forty-five degrees of motion, five cases with abscess, two without abscess; with ninety degrees of motion, three cases with abscess, no case without abscess; with perfectly free motion, two cases with abscess, one without any abscess. Examination proved that motion became less as time went by. In two cases in which there had been ninety degrees of motion several years ago there was at the last examination only thirty degrees.

In fifteen of the cases in which there was little or no motion at the articulation there was no flexion of the thigh; the limp in these cases was trivial. In the cases in which the angle between the flexed thigh and the body was one hundred and twenty to one hundred and thirty-five degrees the impediment to motion was not serious, except in one case, in which there was caries of the lumbar spine. Permanent adduction of the thigh was a much more serious matter. Adduction was likely to occur after removal of the splint and increase up to a certain point. Adduction was present in thirty-three cases, but in only one was it very troublesome.

In only one case of forty examined was there anything which approached at all to true lateral curvature of the spine.

DISCUSSION.

Dr. LOVETT, of Boston, made some remarks, and said he considered adduction the most important factor in cured cases of hip-joint disease. There might be a good deal of bone-shortening with little inconvenience in walking, but slight shortening from adduction caused the gait to become ungainly.

Dr. RIDLON thought the paper showed that cases of hip-joint disease could be treated successfully at a properly-equipped dispen-

sary. He thought some cases were based on a tubercular, others on a syphilitic diathesis; some had a traumatic origin. He would also employ therapeutic measures.

Dr. KETCH said the advantage of the mechanical treatment was not alone in obtaining good final results, but in relieving the patient of pain and enabling him to go about during the treatment.

Dr. LEWIS A. SAYRE thought that, whatever the predisposing cause, the cases could be traced to some traumatism as an exciting cause. He thought the results of treatment regarding motion were much better in his private practice than in the cases seen in dispensary practice by Dr. Shaffer. He was a strong advocate of mechanical treatment, but there were conditions in which excision of the dead bone should be performed, otherwise the patient would die from amyloid degeneration of internal organs.

Dr. V. P. GIBNEY had become a convert to the mechanical treatment of hip-joint disease. The results in cured cases seemed in two respects to be different from what orthopædic surgeons usually led their patients to hope for. It was shown by these statistics that the shortening increased for a time, instead of diminishing, after the cure; further, that the diminished size of the affected limb was not overcome.

Dr. JUDSON thought a large shoe on the instrument or affected limb, instead of the small one usually worn, might tend to make adduction in walking more difficult, by preventing the patient from taking his weight off that limb as quickly as he was inclined to do.

Dr. TAYLOR, Dr. L. H. SAYRE, and Dr. SHAFFER continued the discussion.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held June 8, 1887, the President, T. MITCHELL PRUDDEN, M.D., in the chair.

Dr. PUTNAM JACOBI presented for a candidate a specimen of

ACUTE ATROPHY OF THE STOMACH, WITH FATTY DEGENERATION OF THE HEART.

Dr. DUDLEY presented

THE UTERINE APPENDAGES

of a girl aged 22. At the age of six years the patient had had smallpox, from which she made a good recovery. From six to twelve years of age she had the exanthemata and diphtheria. At twelve she would occasionally faint, and at times complained of headache. At maturity her headache grew steadily worse, and was most severe at the menstrual period. She was then put under the care of a physician, who made the diagnosis of hysteria. Another physician treated her for rheumatism, a third for chronic meningitis; a fourth applied electricity, which made her condition worse; a fifth treated her for rheumatism of the brain. Finally she came under the care of Dr. Hammond, who treated her for brain-congestion, together with other symptoms. She was always of a lively disposition when not in pain. She had never had a true spasm. Dr. Hammond placed her in the care of Dr. Dudley, who found that she was well nourished, that her menses were regular. She suffered no pain except in the head until lately, when she had pain in the side one week before and one week after menstruation. She had taken large quantities of medicine, and had been treated by almost every means for the relief of her nervous condition. She had been a masturbator for years, but said she had given up the habit some months past. The vulva was so hyperæsthetic that a physical examination was very difficult. The meatus was surrounded by a large caruncle. From a superficial examination he found the uterus retroverted, and the ovaries and tubes correspondingly low. At a second examination without ether, he was able only to replace the uterus. Saturday last he examined her under ether. The left ovary seemed to be small; the right ovary seemed to be somewhat enlarged and very sensitive. After consultation, and having obtained the previous consent of the patient, and of her brother, who was a physician, it was decided to make an exploratory operation. The right ovary was found somewhat enlarged, and contained a cyst about the size of an English walnut; the tube was tortuous, and the fimbriated extremity was bound down below the ovary; the ovary and tube were removed. The left ovary was found to be small, and contained a small cyst; the tube was tortuous and bound down to the pelvic floor, and quite close to the intestine; beneath it was a large varix. This ovary and tube, together with the varix, were removed. The patient had since done well.

A point of special interest in the case related to the varicose veins. This was the third case of the kind which he had operated upon during the past year. In all there had been failure to relieve the reflex symptoms by various ordinary measures, such as repairing a lacerated cervix, curetting for a fungous condition of the uterus, the administration of drugs, etc. In the first two cases the pain in the side and other reflex symptoms disappeared after removal of the ovaries and varix. The ovaries were not much enlarged. In the third case the operation had very recently been performed. Dr. Dudley thought that inasmuch as a varicocele in the male might give rise to almost all kinds of reflex symptoms, so also might an analogous condition exist in the female.

Dr. PUTNAM JACOBI thought it would be interesting to know whether or not the small ovary was the seat of interstitial ovaritis. Two years ago she reported three cases in

which the ovaries did not present any very marked lesion when examined macroscopically, but when examined microscopically there was found degeneration of the arteries and the signs of interstitial ovaritis, and she thought this was much more the cause of the severe nervous symptoms which had existed than was any slight cystic degeneration. In fact, a cyst of considerable size might exist and cause no suffering or tenderness when pressure was made over the abdomen. She referred to the case of a young lady, who, before coming East, had undergone at least one year's continuous treatment in a Western State for symptoms related presumably to an existing enlargement and prolapsus of both ovaries. The treatment by galvanism was continued, and an attempt was made to replace the ovaries, and a boro-glyceride cotton tampon was introduced into the vagina. At first this local treatment seemed to be beneficial, but the relief proved to be only temporary, and the tampon after a time seemed to cause irritation. Local treatment was then discontinued two or three months, during which time the patient received simple massage, to some extent electrical massage, the cold pack with rubbing, and general treatment. Under this plan the pain in the back and the nervous symptoms generally had entirely disappeared, also the tenderness on pressure over the ovaries, although the organs remained prolapsed and enlarged. Dr. Jacobi had seen at least two or three cases in which the enlarged and prolapsed condition of the ovaries had continued after relief of all the apparently associated symptoms.

Dr. DUDLEY requested that his specimen be submitted to the Committee on Microscopy. The request was granted. Referring to the remarks of Dr. Putnam Jacobi, he expressed the belief that cotton tampons with boro-glyceride produced their beneficial effect by causing contraction of the vessels and reducing uterine congestion. He did not think that in his case there had been acute ovaritis; the patient had not complained of pain in the region of the ovary until very recently. As to the relief of symptoms by cotton tampons containing glycerin, he had two cases of prolapsus of both ovaries and tubes in which such treatment would cause almost entire disappearance of the symptoms for a month or two, but they would return with each new exposure to cold, over-exertion, etc.

Dr. PUTNAM JACOBI thought that in the case related by her the uterus was perfectly healthy, and the tampons had produced only slight relief, whereas the general treatment had caused entire cessation of the subjective symptoms.

The PRESIDENT said it was so seldom one found a normal ovary that it was difficult to obtain a sufficient number for demonstration before students. Interstitial ovaritis was very common, even in cases in which there had been no history of symptoms associated with it during life.

Dr. W. P. NORTHRUP asked Dr. Dudley whether he had noticed in his cases any of the changes in the features alleged to take place after removal of the ovaries.

Dr. DUDLEY replied that in none had he noticed any change, excepting that usually there was an increase in flesh, and some patients complained of flushes in the head after removal of the ovaries.

EPILEPSY—BONY EXCRESCENCES ON THE INNER SURFACE OF THE CRANIUM.

Dr. THATCHER presented the skull of a colored woman, aged about 35 years, who had complained of severe headaches for three years, which she thought were due to menstrual troubles, of which she had some. There were chronic changes in the kidneys, but no diagnosis of kidney-disease had been made by the physician in charge. The urine had, according to the report, been of fairly high specific gravity and contained no albumen. There was no history of venereal disease. During the past three months the patient had had occasional attacks of vertigo, with loss of consciousness and falling to the ground. The attacks became more and more frequent towards the end of life. She gradually weakened and died. The diagnosis made was epilepsy. There were found, at autopsy, bony excrescences on the inner surface of the frontal bone, and some calcified masses in the dura mater. The dura was closely adherent to the skull.

REMOVAL OF THE RIGHT HALF OF THE LOWER JAW BY SLOW ENUCLEATION.

Dr. JOSEPH W. HOWE sent a man who in October last received a severe blow on the under surface of the chin, exposing the bone. The wound was sewed up at St. Luke's Hospital, but failed to unite. The jaw afterward became much swollen and painful, and the patient sought admission to St. Francis's. Dr. Howe made an examination early in November, and found a swelling extending from the symphysis to the posterior part of the ramus of the jaw on the right side. A small sinus led to the dead bone. The teeth were loosened, the alveolar processes were stripped bare, were rough, and bathed in pus. The periosteum was separated along the upper line of the jaw back to the ramus, and in some places was completely destroyed. The lower teeth were removed from the jaw the following day, and a portion of the periosteum separated. This process of separating the periosteum was continued for several weeks, the parts were thoroughly cleansed, and the general health was looked after. With the stripping of the bone the periosteum gradually thickened so as to increase the swelling on the affected side. Finally, he was

able to pull out the diseased jaw, leaving behind a good basis for a new jaw in the ossifying periosteum. The patient, when presented, had a new jaw, which had grown from the periosteum of the old jaw.

A CASE OF INTUSSUSCEPTION.

Dr. W. P. NORTHRUP presented the specimen, removed from a boy aged 5 months, who was cared for during his illness "between" two or three physicians, which would account for the meagre history and lack of diagnosis. The child was strong, and had had no previous disease. Forty-eight hours before death, the record stated, he had severe diarrhœa, with vomiting. During the last twelve hours the vomiting increased in severity, and the diarrhœal discharges became bloody mucus. The patient cried shrilly, and had "inward convulsions." Death took place forty-eight hours after the commencement of the symptoms. At the autopsy the abdomen was tensely distended. The distention was found to be wholly of the small intestines. The stomach was empty, the colon and rectum collapsed. The small intestines were normal, except that there was a little swelling of Peyer's patches. The colon and rectum were smeared with blood-stained mucus. The only lesion found was a tumor four inches long, an inch and a quarter thick, round, firm, the color bluish, which was found to be an invagination of the cæcum into the transverse colon. The latter was in normal condition, the former deeply congested. The gut was believed to be not gangrenous.

TREATMENT OF ALOPECIA AREATA.—Schachmann (*Annales de Derm. et de Syph.*, vol. viii. No. 1) has followed successfully M. Vidal's treatment of alopecia areata by blisters. The whole surface of the area is blistered, the blistered surface being treated in the ordinary way. Generally within three days it is possible to apply another blister. Three, four, up to six or even ten blisters are used successively; and, in addition, the rest of the head is rubbed night and morning with a lotion consisting of water one hundred, turpentine twenty, ammonia five. When the affected surface is very large, or when the whole head is affected, the part to be treated is divided into fields, and the fields are treated successively. The circumference of the area is shaved to the extent of about a centimetre. Twenty-nine cases are related in which this method was employed. Ten of these were also treated by stimulating applications, such as pyroligneous acid and croton oil, which gave no good result in spite of long treatment. The duration of the malady never exceeded three months from the time the blisters were begun. In a number of cases it did not reach two months, and in others a cure took place much sooner. Sometimes the hair began to grow after three or four blisters.—*London Med. Record.*

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JULY 17, 1887, TO JULY 30, 1887.

COLONEL D. L. MAGRUDER, SURGEON.—Granted leave of absence for one month, to take effect on or about August 10, 1887. S. O. 170, A. G. O., July 25, 1887.

Paragraph 13, S. O. 167, A. G. O., July 21, 1887, assigns LIEUTENANT-COLONEL A. HEGAR, SURGEON, to duty as member of Army Retiring Board convened at Governor's Island, New York Harbor, New York, *vice* COLONEL CHARLES SUTHERLAND, SURGEON, hereby relieved.

MAJOR D. G. CALDWELL, SURGEON.—Order relieving him from duty at Fort D. A. Russell, Wyoming, and assigning him to duty at Fort Assiniboine, Montana, is revoked. S. O. 168, A. G. O., July 22, 1887.

MAJOR P. J. A. CLEARY, SURGEON.—Ordered to Fort Assiniboine, Montana, instead of Fort D. A. Russell, Wyoming. S. O. 168, A. G. O., July 22, 1887.

MAJOR ELY MCCLELLAN, SURGEON.—Detailed as member of a board of survey to meet at the medical purveying depot, St. Louis, Missouri, on August 1, 1887. S. O. 173, A. G. O., July 28, 1887.

CAPTAIN S. G. COWDERY, ASSISTANT-SURGEON.—Granted one month's leave of absence, to take effect on or about July 24. S. O. 79, Department of Texas, July 13, 1887.

By paragraph 43, S. O. 162, A. G. O., July 15, so much of paragraph 1, S. O. 156, c. s., A. G. O., as directs CAPTAIN JOHN DE B. W. GARDINER, ASSISTANT-SURGEON, to report for duty at Fort Washakie, Wyoming, is revoked.

By paragraph 42, S. O. 162, A. G. O., July 15, so much of paragraph 1, S. O. 156, c. s., A. G. O., as relieves CAPTAIN GEORGE H. TORNEY, ASSISTANT-SURGEON, from duty at Fort Monroe, Virginia, is revoked.

CAPTAIN R. BARNETT, ASSISTANT-SURGEON.—Sick-leave still further extended six months, on account of sickness. S. O. 162, A. G. O., July 15, 1887.

CAPTAIN H. G. BURTON, ASSISTANT-SURGEON.—Sick-leave of absence extended three months. S. O. 171, A. G. O., July 26, 1887.

CAPTAIN E. F. GARDNER, ASSISTANT-SURGEON.—Ordered for duty at Fort Reno, Indian Territory. S. O. 170, A. G. O., July 25, 1887.

CAPTAIN A. W. TAYLOR, ASSISTANT-SURGEON.—Now at Fort Laramie, Wyoming, is ordered for temporary duty at Fort Robinson, Nebraska. S. O. 162, A. G. O., July 15, 1887.

FIRST-LIEUTENANT C. S. BLACK, ASSISTANT-SURGEON.—Ordered for duty as post-surgeon, Fort Bliss, Texas, during the absence on leave of Captain S. G. Cowdery, Assistant-Surgeon. S. O. 79, Department of Texas, July 13, 1887.

FIRST-LIEUTENANT W. D. MCCAW, ASSISTANT-SURGEON.—Ordered for temporary duty at Fort Riley, Kansas. S. O. 78, Department of Missouri, July 25, 1887.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U.S. MARINE HOSPITAL SERVICE FOR THE WEEK ENDING JULY 23, 1887.

FESSENDEN, C. S. D., SURGEON.—Granted leave of absence for thirty days, on account of sickness, July 18, 1887.

MEAD, F. W., PASSED ASSISTANT-SURGEON.—Granted leave of absence for thirty days, July 19, 1887.

YEMANS, H. W., PASSED ASSISTANT-SURGEON.—Granted leave of absence for thirty days, July 23, 1887.

BROOKS, S. D., PASSED ASSISTANT-SURGEON.—Promoted and appointed Passed Assistant-Surgeon from July 1, 1887, July 21, 1887.

WHITE, J. H., ASSISTANT-SURGEON.—To proceed to Washington, D.C., as escort to an insane seaman, July 18, 1887; ordered to examination for promotion, July 23, 1887.

WATKINS, R. B., ASSISTANT-SURGEON.—Leave extended fourteen days, on account of sickness, July 20, 1887.

MAGRUDER, G. M., ASSISTANT-SURGEON.—To proceed to Galveston, Texas, for temporary duty, July 21, 1887.